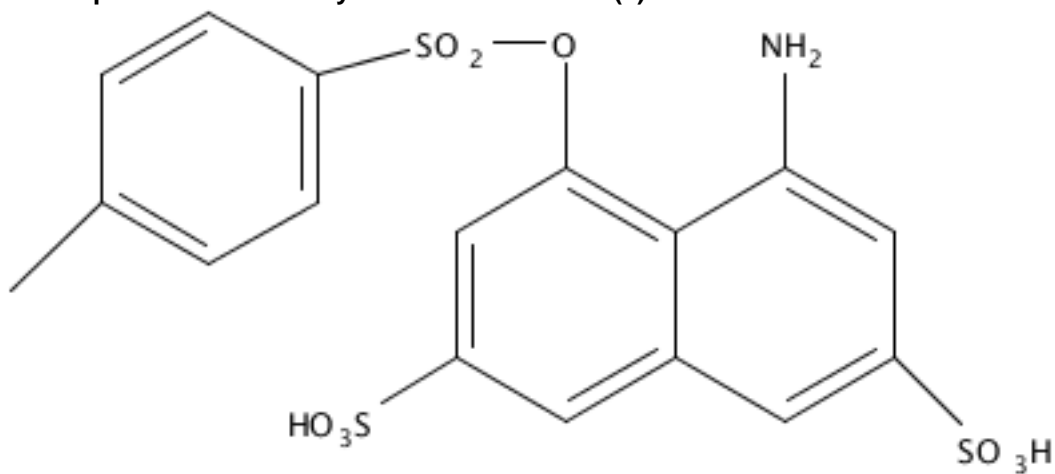


Task History

Task Began April 27, 2018 06:46 AM

Explore substances by SUBSTRUCTURE ID(1)



Answer Type:

Substances

Result Count:

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Detailed display

From ID:

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6837-93-0

Retrieve reference information in 1 substance 6837-93-0 (ID 2)

From ID:

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Answer Type:

References

Result Count:

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1. Azo compound for ink composition with excellent gas resistance, printability, color rendering property, recording method and colored product

By: Ishiguro, Yasuaki; Ono, Daisuke; Masegi, Junya; Oshima, Kenji

Assignee: Nippon Kayaku Kabushiki Kaisha, Japan

Patent Information: Oct 06, 2016, JP 2016175996, A

Application: Mar 20, 2015, JP 2015-57127

Priority: Mar 20, 2015, JP 2015-57127

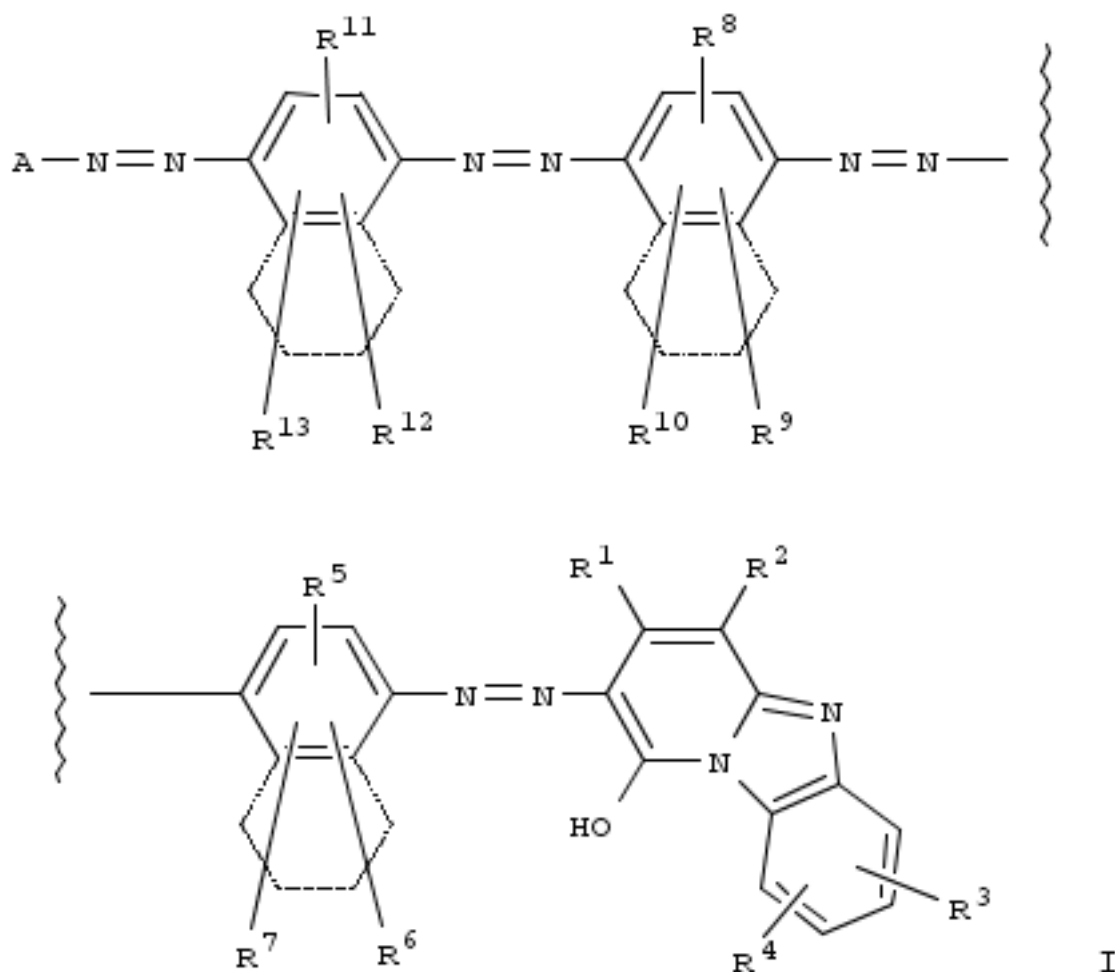
Source: Jpn. Kokai Tokkyo Koho, 50pp., Patent, 2016, CODEN: JKXXAF

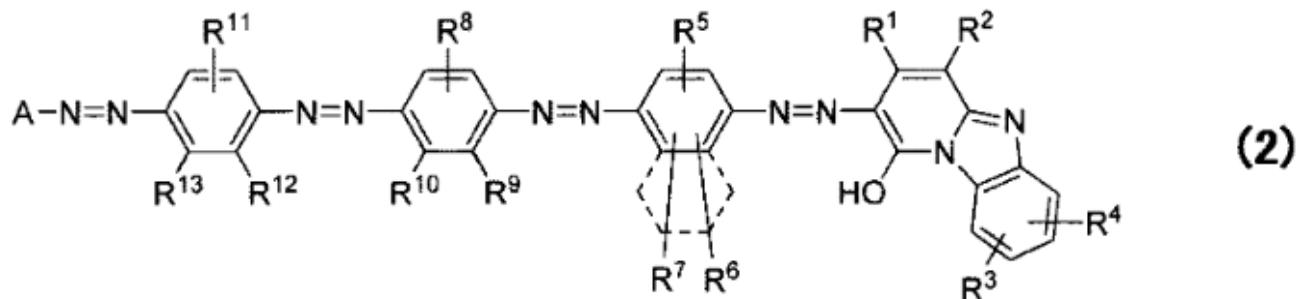
Accession Number: 2016:1611963, CAN 165:476473, CAPLUS

Language: Japanese

Abstract

The invention relates to an azo compd. represented by the following formula I or its salt thereof [wherein, R¹ is an alkyl group of C₁₋₄; R² is a cyano group; R⁵-R⁷ are each independently hydrogen, C₁₋₄ alkyl group, C₁₋₄ alkoxy group; R⁸-R¹⁰ are each independently hydrogen, C₁₋₄ alkyl carbonyl amino group, C₁₋₄ alkylthio group; R¹¹ is C₁₋₄ alkylthio group; R¹² and R¹³ are each independently hydrogen, C₁₋₈ alkyl carbonyl amino groups C₁₋₈; Group A is substituted naphthyl group]. Thus, sodium salt of azo compd. (prepn. shown) 1 part, glycerin 5 parts, urea 5 parts, N-methyl-2-pyrrolidone 4 parts, isopropanol 3 parts, Butyl Carbitol 2 parts, taurine 0.3 parts, EDTA disodium salt 0.1 parts, aq. sodium hydroxide soln. 79.5 parts were mixed to get an aq. ink compn., which was filtered using 0.45 μm membrane filter to get an ink which was printed over glossy paper using ink jet printer.



**Patent Information**

Patent No.	Kind	Date	Application No.	Date
JP 2016175996	A	Oct 06, 2016	JP 2015-57127	Mar 20, 2015

Priority Application

JP 2015-57127	Mar 20, 2015
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Indexing

Coatings, Inks, and Related Products (Section 42-12)
Section cross-reference(s):41

Supplementary Terms

azo compd ink compn recording method colored product; ink compn gas resistance printability

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2. Black triazo compound or salt thereof with excellent light fastness and dyeing property, dye composition using thereof, and dyeing method thereof

By: Sasaki, Keijo; Yamamoto, Nobutaka

Assignee: Nippon Kayaku Kabushiki Kaisha, Japan

Patent Information: Mar 17, 2016, JP 2016034989, A

Application: Aug 01, 2014, JP 2014-157331

Priority: Aug 01, 2014, JP 2014-157331

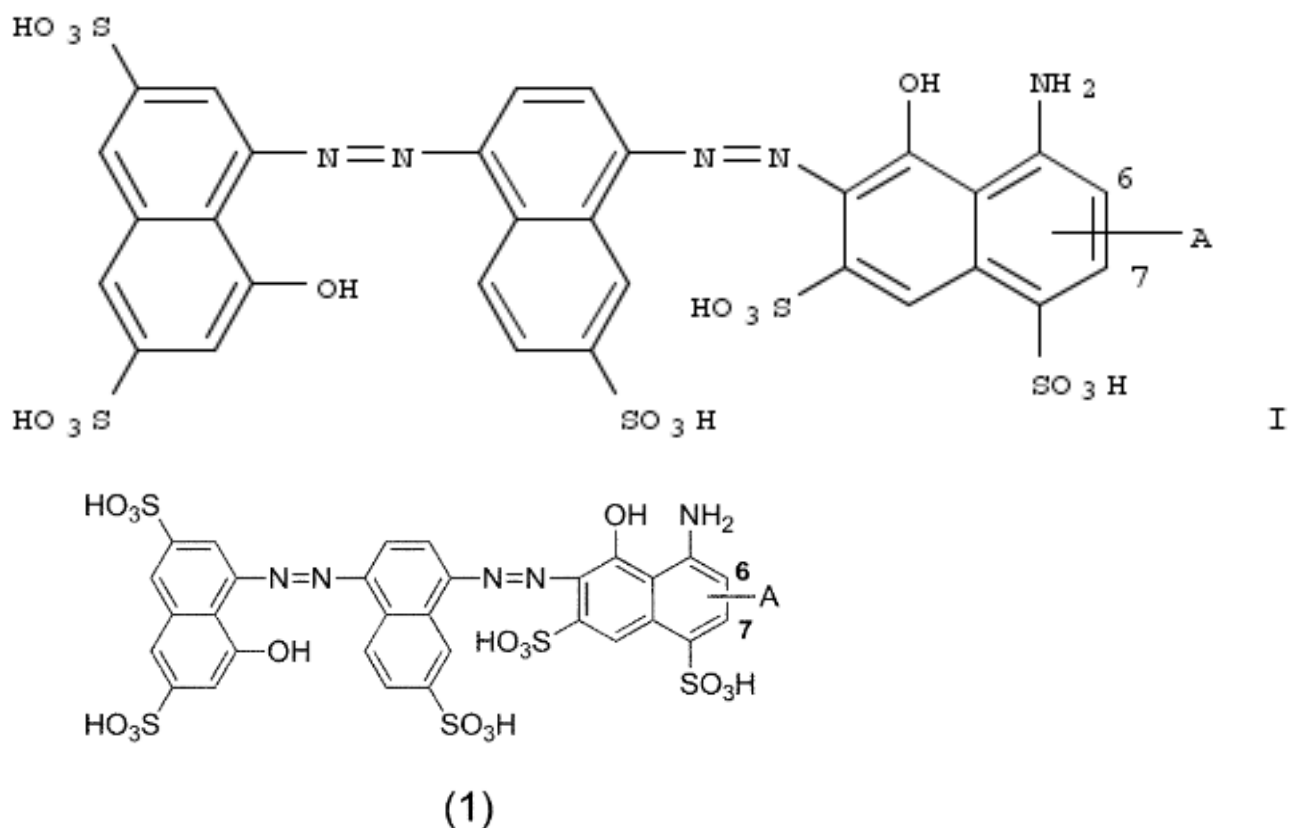
Source: Jpn. Kokai Tokkyo Koho, 11pp., Patent, 2016, CODEN: JKXXAF

Accession Number: 2016:419648, CAN 164:417516, CAPLUS

Language: Japanese

Abstract

Title compd. or its salt is represented by I wherein A = (7-sulfonaphthalen-1-yl)diazenyl or (4-carboxyphenyl)diazenyl. Thus, 1.0 part triazo compd. (dye) prepd. from azo coupling of 1-amino-8-(4-methylphenylsulfonyloxy)monoazo compd. prepd. from 3,6-disulfonic acid and monoazo compd. prepd. from 4-amino-5-hydroxynaphthalene-1,7-disulfonic acid, 1000 parts water and 300 parts beaten kraft pulp (30 parts bone dry pulp) were mixed and stirred for 15 mins, 1 part rosin sizing agent (30% aq. soln.) was added and stirred for 10 min therein, and 3 parts crystal aluminum sulfate was added and stirred for 10 min therein, and the obtd. pulp was dyed for making paper which was dried to give a black dyed product.

**Patent Information**

Patent No.	Kind	Date	Application No.	Date
JP 2016034989	A	Mar 17, 2016	JP 2014-157331	Aug 01, 2014

Priority Application

JP 2014-157331	Aug 01, 2014
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Indexing

Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers (Section 41-3)
 Section cross-reference(s):40

Supplementary Terms

trisazo black dye cellulose fiber material dyeing method

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3. Inhibitors of ERCC1-XPF for treatment of antiproliferative disorders, such as cancer

By: Patrick, Stephan M.; Erhardt, Paul W.; Trabbic, Christopher

Assignee: The University of Toledo, USA

Patent Information: May 28, 2015, WO 2015077753, A1

Application: Nov 25, 2014, WO 2014-US67289

Priority: Nov 25, 2013, US 2013-61908431, Nov 25, 2014, WO 2014-US67289

Source: PCT Int. Appl., 28pp., Patent, 2015, CODEN: PIXXD2

Accession Number: 2015:895593, CAN 163:17453, CAPLUS

Language: English

Abstract

Compns. and methods for inhibiting the DNA repair protein complex, ERCC1-XPF, and methods to enhance clin. responses to anticancer drugs that interact with DNA such as cisplatin, and to overcome drug resistance due to DNA repair mechanisms, are described.

Patent Information

Patent No.	Kind	Date	Application No.	Date
WO 2015077753	A1	May 28, 2015	WO 2014-US67289	Nov 25, 2014
EP 3073825	A1	Oct 05, 2016	EP 2014-863805	Nov 25, 2014
US 20160296556	A1	Oct 13, 2016	US 2016-15038585	May 23, 2016
US 9821008	B2	Nov 21, 2017		

Priority Application

US 2013-61908431	P	Nov 25, 2013
WO 2014-US67289	W	Nov 25, 2014

Indexing

Pharmacology (Section 1-6)
Section cross-reference(s):63

Supplementary Terms

ERCC1 XPF inhibitor cisplatin cancer

Citations

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- 4)Jordheim; Mol Pharmacol 2013, 84, 12
- 5)KIRCHMAIR JOHANNES DR; EP 2599480 A1 2013

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4. Tetrakis-azo compound for black colors, dye composition including same, and dyeing method using same

By: Sasaki, Keijou; Yamamoto, Nobutaka

Assignee: Nippon Kayaku Kabushiki Kaisha, Japan

Patent Information: Oct 02, 2014, WO 2014156852, A1

Application: Mar 18, 2014, WO 2014-JP57419

Priority: Mar 28, 2013, JP 2013-68586, Mar 18, 2014, WO 2014-JP57419

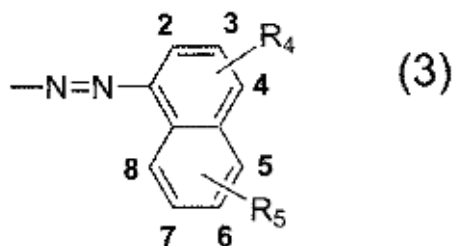
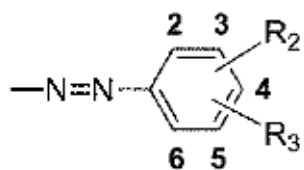
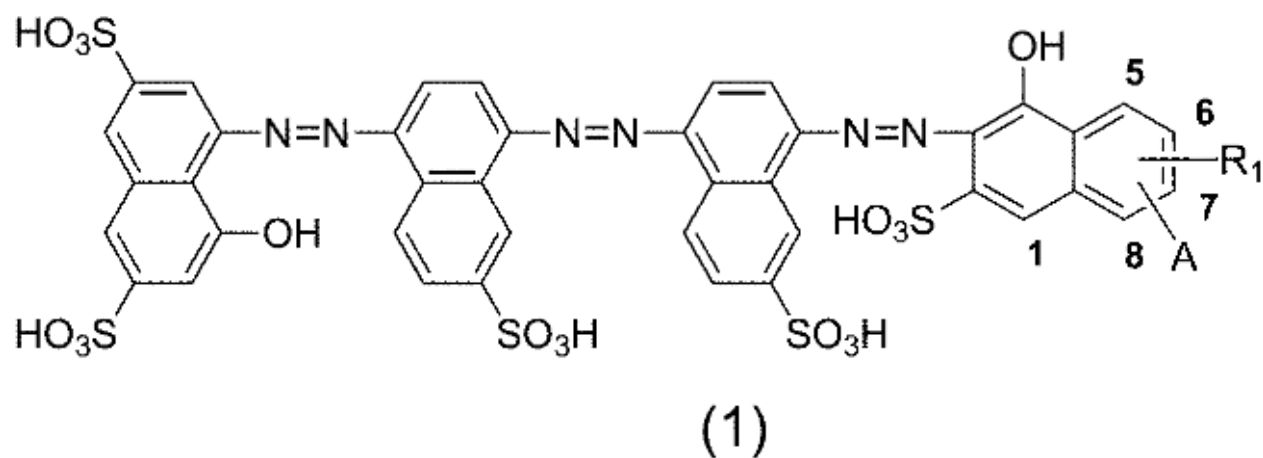
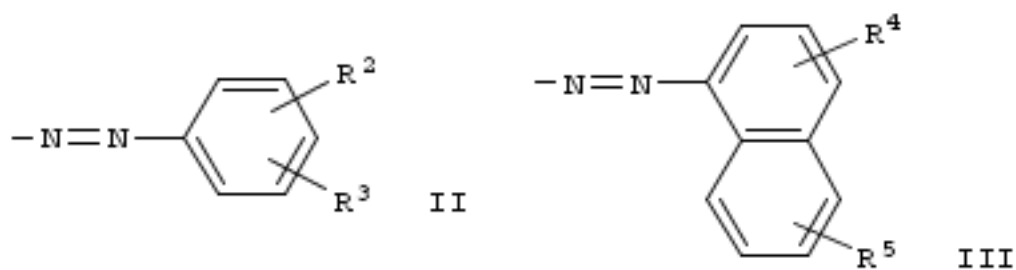
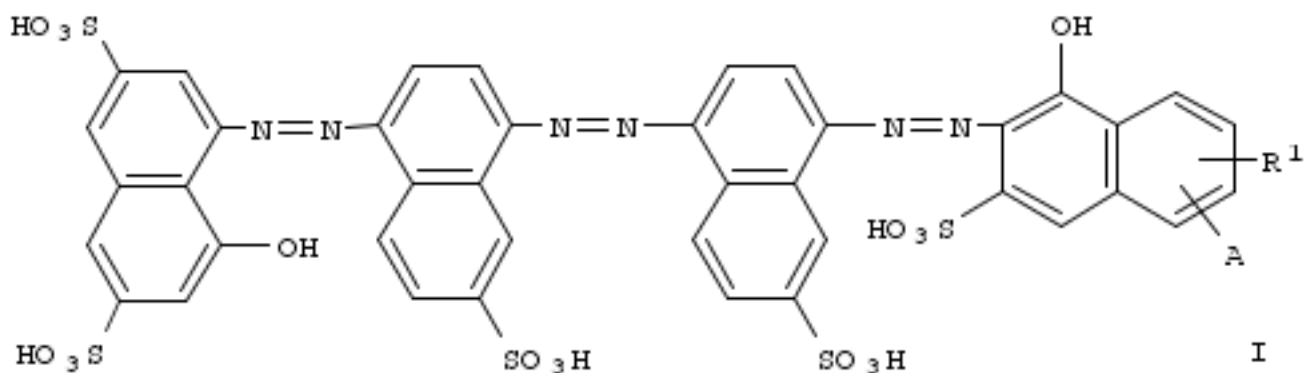
Source: PCT Int. Appl., 24pp., Patent, 2014, CODEN: PIXXD2

Accession Number: 2014:1658916, CAN 161:506613, CAPLUS

Language: Japanese

Abstract

Provided is a tetrakis-azo compd. as black colors represented by general formula (I), or a salt thereof, wherein R¹ = phenylamino group and A = substituent group represented by (II) or (III), R²⁻⁵ = sulfo, COOH, etc. The compd. is suitable for use with paper and pulp, has superior dyeing properties and light resistance, and can be produced without using dianisidine, which is a Class 1 Specified Chem. Substance.



Patent Information

Patent No.	Kind	Date	Application No.	Date
WO 2014156852	A1	Oct 02, 2014	WO 2014-JP57419	Mar 18, 2014
CN 105102546	A	Nov 25, 2015	CN 2014-80018072	Mar 18, 2014
CN 105102546	B	Mar 08, 2017		
JP 6265973	B2	Jan 24, 2018	JP 2015-508376	Mar 18, 2014
IN 2015DN09787	A	Mar 18, 2016	IN 2015-DN9787	Oct 16, 2015

Priority Application

JP 2013-68586	A	Mar 28, 2013
WO 2014-JP57419	W	Mar 18, 2014

Indexing

Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers (Section 41-3)
 Section cross-reference(s): 40, 45

Supplementary Terms

azo dye black color dyeing prepn

Citations

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5. Black azo dye, dye composition for dyeing cellulose fiber, and dyed body having improved light fastness

By: Sasaki, Keijo; Uto, Junichi; Kako, Ryutaro; Yamamoto, Nobutaka; Koshikawa, Emi

Assignee: Nippon Kayaku Co., Ltd., Japan

Patent Information: Dec 12, 2013, JP 2013249358, A

Application: May 31, 2012, JP 2012-124062

Priority: May 31, 2012, JP 2012-124062

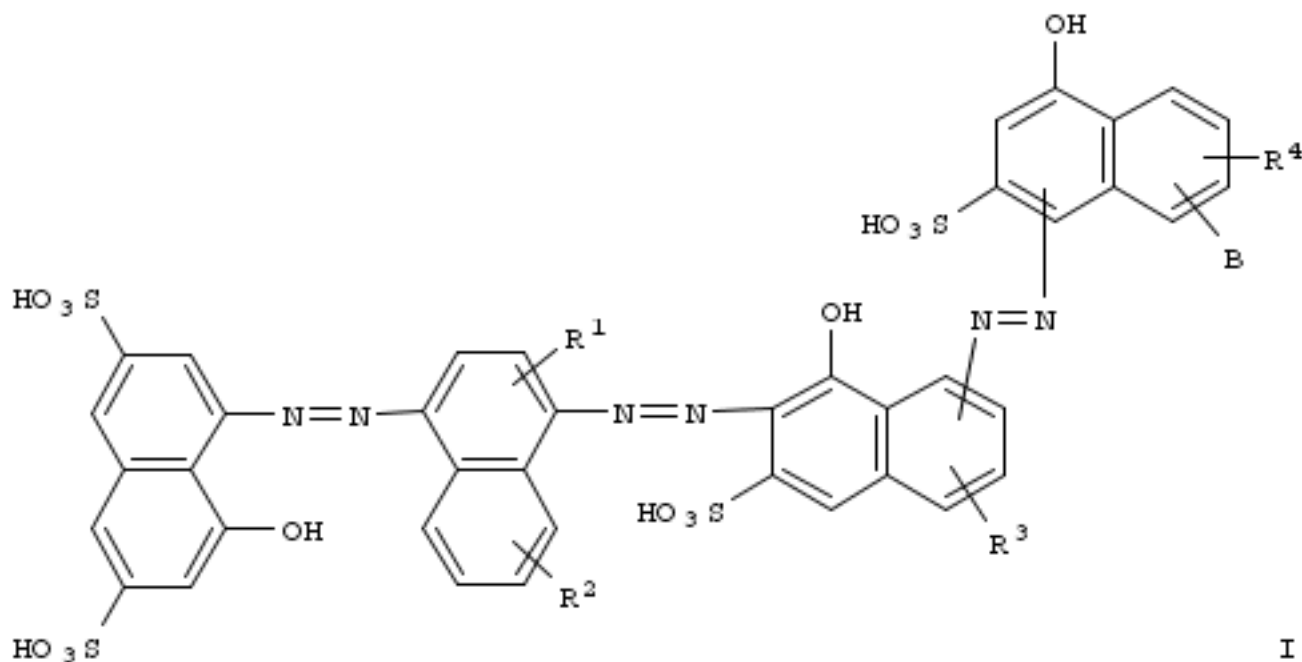
Source: Jpn. Kokai Tokkyo Koho, 19pp., Patent, 2013, CODEN: JKXXAF

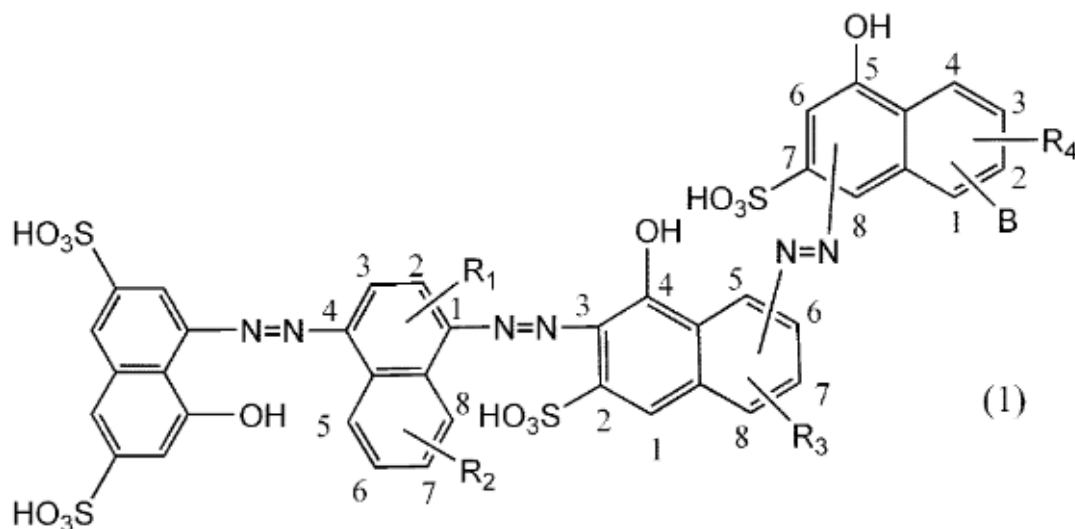
Accession Number: 2013:1900785, CAN 160:35105, CAPLUS

Language: Japanese

Abstract

The invention relates to a black azo compd. represented by formula I ($R^1 = \text{H}$, C_{1-4} -alkyl, etc.; $R^2, R^3 = \text{H}$, sulfo; $R^4 = \text{C}_{1-4}$ -alkyl, C_{1-4} -alkoxy, etc.; $B = \text{H}$, etc.), or a salt thereof.





Patent Information

Patent No.	Kind	Date	Application No.	Date
JP 2013249358	A	Dec 12, 2013	JP 2012-124062	May 31, 2012

Priority Application

JP 2012-124062	May 31, 2012
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Indexing

Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers (Section 41-3)
 Section cross-reference(s): 40, 42, 43

Supplementary Terms

black azo dye compn cellulose fiber dyeing paper pulp

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6. Pharmaceutical compositions comprising neuraminidase inhibitors for the treatment of influenza virus infection

By: Kirchmair, Johannes; Schmidtke, Michaela; Liedl, Klaus; Rollinger, Judith, M.

Assignee: Universitaet Innsbruck, Austria

Patent Information: Jun 05, 2013, EP 2599480, A1

Application: Dec 03, 2011, EP 2011-9595

Priority: Dec 03, 2011, EP 2011-9595

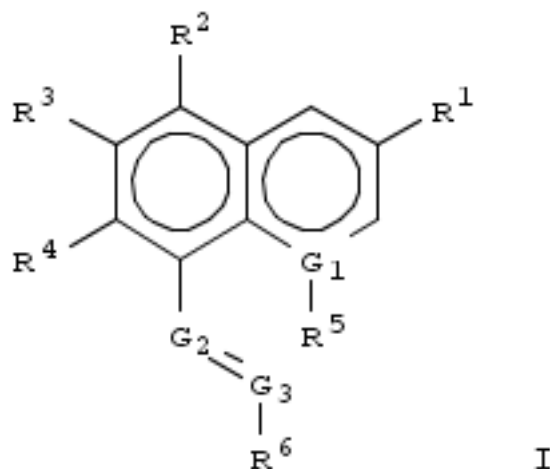
Source: Eur. Pat. Appl., 32pp., Patent, 2013, CODEN: EPXXDW

Accession Number: 2013:876024, CAN 159:68772, CAPLUS

Language: English

Abstract

The invention relates to pharmaceutical compns. comprising naphthalene derivs. of formula I [R^1, R^2, R^3, R^5 = independently $SO_3H, COOH, OH, NH_2, H$; $R^4 = OH, HN_2, H$; R^6 = alkyl, Ph, heterocycle etc.; G_1, G_2, G_3 = independently un(substituted) N, C] for use in the treatment or prevention of an influenza virus infection. In particular, the disclosed compds. inhibit viral neuraminidase, preferably of influenza viruses resistant to known neuraminidase inhibitors.



Patent Information

Patent No.	Kind	Date	Application No.	Date
EP 2599480	A1	Jun 05, 2013	EP 2011-9595	Dec 03, 2011

Priority Application

EP 2011-9595	Dec 03, 2011
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Indexing

Pharmacology (Section 1-3)
Section cross-reference(s):7

Supplementary Terms

neuraminidase inhibitor naphthalene deriv antiviral influenza virus infection treatment

Citations

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- 9)US GOV HEALTH & HUMAN SERV; WO 2008042806 A2 2008
- 10)US HEALTH; WO 9222610 A1 1992
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7. Azo compounds, storage-stable ink compositions, ink-jet printing method, ink-jet printers, and colored products

By: Matsui, Takahiko; Shimizu, Shinsuke

Assignee: Nippon Kayaku Co., Ltd., Japan

Patent Information: Jun 18, 2009, JP 2009132794, A

Application: Nov 30, 2007, JP 2007-309731

Priority: Nov 30, 2007, JP 2007-309731

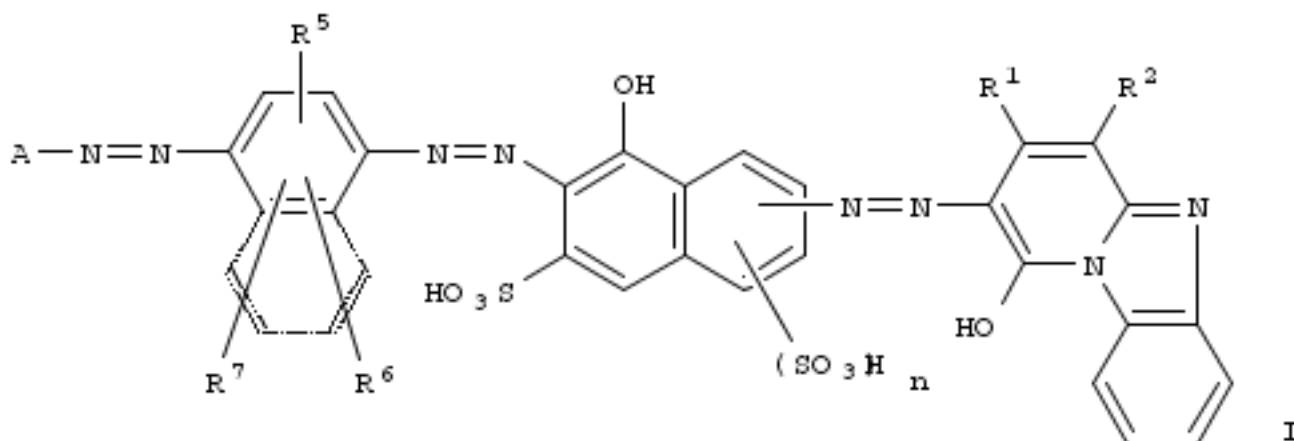
Source: Jpn. Kokai Tokkyo Koho, 65pp., Patent, 2009, CODEN: JKXXAF

Accession Number: 2009:732482, CAN 151:58171, CAPLUS

Language: Japanese

Abstract

Title compds. with good water soly. comprise I (R^1 - R^7 , A = substituent specified by the document; $n = 0, 1$) or their salts. The ink compns. contain ≥ 1 of the compds. as dyes. The printing method and the printers using the compds. are also claimed. Thus, a black aq. ink contg. I ($R^1 = \text{Me}$, $R^2 = \text{CN}$, $R^3 = \text{SO}_3\text{H}$, $R^4 = \text{H}$, $R^5 = \text{OCH}_2\text{CH}_2\text{CH}_2\text{SO}_3\text{H}$, $R^6 = \text{Me}$, $R^7 = \text{H}$, A = 2- SO_3H -4- $\text{NO}_2\text{C}_6\text{H}_3$, $n = 1$) gave light- and ozone-resistant images.

**Patent Information**

Patent No.	Kind	Date	Application No.	Date
JP 2009132794	A	Jun 18, 2009	JP 2007-309731	Nov 30, 2007

Priority Application

JP 2007-309731	Nov 30, 2007
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Indexing

Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers (Section 41-3)
Section cross-reference(s): 28, 42, 74

Supplementary Terms

azo dye jet printing black ink; water soly azo dye black ink; storage stability azo dye black ink; light resistance azo dye black ink; ozone resistance azo dye black ink

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8. Trisazo compounds with good solubility for ink compositions with good storage stability, high density, fastness properties, and bronzing resistance

By: Hirota, Koji; Matsui, Takahiko; Dejima, Yoshiyuki; Yoshimoto, Takashi

Assignee: Nippon Kayaku Kabushiki Kaisha, Japan

Patent Information: Aug 14, 2008, WO 2008096697, A1

Application: Feb 04, 2008, WO 2008-JP51740

Priority: Feb 05, 2007, JP 2007-26199

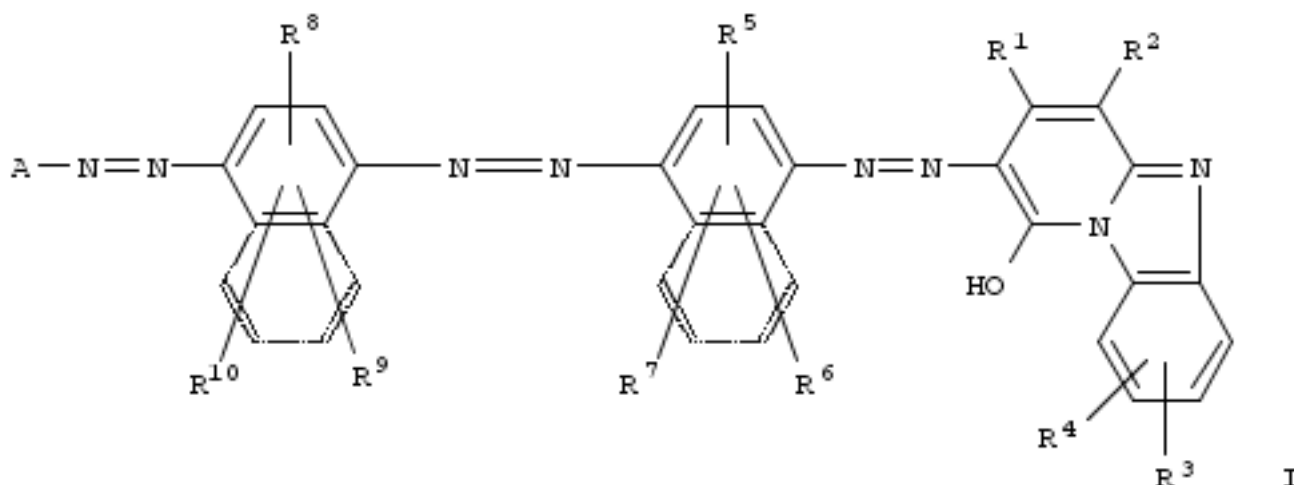
Source: PCT Int. Appl., 74pp., Patent, 2008, CODEN: PIXXD2

Accession Number: 2008:974316, CAN 149:269521, CAPLUS

Language: Japanese

Abstract

The present invention relates to trisazo compds. (I), wherein A = substituted Ph or naphthyl; R^1 = carboxy (un)substituted C_{1-4} alkyl; R^2 = cyano; R^3, R^4 = independently H or sulfo; and R^{5-10} = independently H, sulfo, or C_{1-4} alkyl. Thus, diazotized 2-aminonaphthalene-1,5-disulfonic acid and 3-(2-amino-4-methylphenoxy)-1-propanesulfonic acid were coupled, the resulting azo compd. was diazotized and coupled with 3-(2-amino-4-methylphenoxy)-1-propanesulfonic acid, the resulting diazo compd. was diazotized and coupled with 4-cyano-1-hydroxy-3-methyl-pyrido[1,2-a]benzimidazolesulfonic acid, sodium hydroxide was added into a reaction mixt. and purified to give a trisazo compd. with λ_{max} 551.5 nm.



Patent Information

Patent No.	Kind	Date	Application No.	Date
WO 2008096697	A1	Aug 14, 2008	WO 2008-JP51740	Feb 04, 2008

Priority Application

JP 2007-26199	A	Feb 05, 2007
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Indexing

Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers (Section 41-3)
 Section cross-reference(s):42

Supplementary Terms

trisazo compd soly ink compn storage stability high density; fastness property bronzing resistance;
 aminonaphthalenedisulfonic acid aminomethylphenoxypropanesulfonic acid reactant diazo compd prepn;
 cyanohydroxymethylpyridobenzimidazolesulfonic acid coupling trisazo compd prepn

Citations

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- 12)Ciba-Geigy Ag; FR 2286176 A1 1976
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- 14)Ciba-Geigy Ag; JP 51-060222 A 1976
- 15)Ciba Speciality Chemicals Holding Inc; EP 1570004 A2 2004
- 16)Ciba Speciality Chemicals Holding Inc; WO 2004050768 A2 2004
- 17)Ciba Speciality Chemicals Holding Inc; US 20060053571 A1 2004
- 18)Ciba Speciality Chemicals Holding Inc; JP 2006509068 A 2004
- 19)Nippon Kayaku Co Ltd; WO 2007077931 A1 2007

9. Potent inhibition of human apurinic/aprimidinic endonuclease 1 by arylstibonic acids

By: Seiple, Lauren A.; Cardellina, John H., II; Akee, Rhone; Stivers, James T.

Source: Molecular Pharmacology, Volume: 73, Issue: 3, Pages: 669-677, Journal, 2008, CODEN: MOPMA3, ISSN: 0026-895X, DOI: 10.1124/mol.107.042622

Company/Organization: Department of Pharmacology and Molecular Sciences, The Johns Hopkins University School of Medicine, Baltimore, MD, USA

Accession Number: 2008:323304, CAN 148:509400, CAPLUS

Publisher: American Society for Pharmacology and Experimental Therapeutics

Language: English

Abstract

Human apurinic/aprimidinic endonuclease (Ape1) plays an important role by processing the >10,000 highly toxic abasic sites generated in the genome of each cell every day. Ape1 has recently emerged as a target for inhibition, in that its overexpression in tumors has been linked with poor response to both radiation and chemotherapy and lower overall patient survival. Inhibition of Ape1 using siRNA or the expression of a dominant-neg. form of the protein has been shown to sensitize cells to DNA-damaging agents, including various chemotherapeutic agents. However, potent small-mol. inhibitors of Ape1 remain to be found. To this end, we screened Ape1 against the NCI Diversity Set of small mols. and discovered arom. nitroso, carboxylate, sulfonamide, and arylstibonic acid compds. with micromolar affinities for the protein. A further screen of a 37-compd. arylstibonic acid sublibrary identified ligands with IC₅₀ values in the range of 4 to 300 nM. The neg. charged stibonic acids act by a partial-mixed mode and probably serve as DNA phosphate mimics. These compds. provide a useful scaffold for development of chemotherapeutic agents against Ape1.

Indexing

Pharmacology (Section 1-3)

Section cross-reference(s):7

Supplementary Terms

arylstibonate deriv structure activity antitumor apurinic apyrimidinic endonuclease 1

Citations

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10. Manufacture of high-purity naphthol-based polyazo dyes

By: Ono, Hiroaki; Matsui, Takahiko; Yoneda, Takashi

Assignee: Nippon Kayaku Co., Ltd., Japan

Patent Information: Mar 23, 2006, JP 2006076908, A

Application: Sep 08, 2004, JP 2004-261153

Priority: Sep 08, 2004, JP 2004-261153

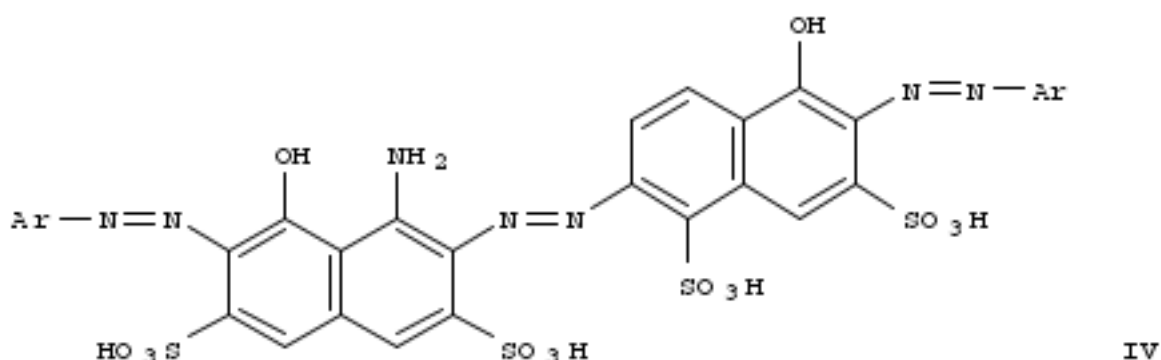
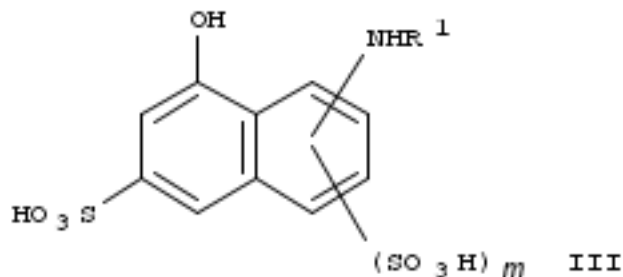
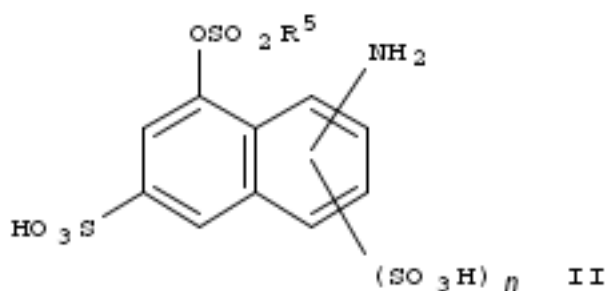
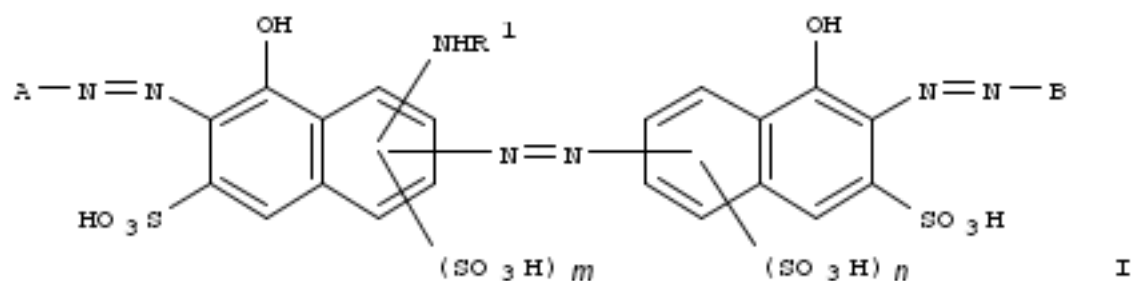
Source: Jpn. Kokai Tokkyo Koho, 32 pp., Patent, 2006, CODEN: JKXXAF

Accession Number: 2006:267376, CAN 144:313695, CAPLUS

Language: Japanese

Abstract

The dyes I [$R^1 = H$, alkyl, (substituted) Ph; A, B = (substituted) Ph, naphthyl, 5- or 6-membered arom. heterocyclyl bonded to azo group via C, monoazo; m, n = 0, 1], useful for fiber dyeing or ink-jet printing, are manufd. by diazotization of 1,3-disulfo-aminonaphthalenes II ($R^5 = Me$, Ph, p-methylphenyl; n = 0, 1), coupling with 1-hydroxy-3-sulfo-aminonaphthalenes III (R^1 , m = same as I) under acidic condition, diazo coupling with ANH_2 (A = same as I) under alk. condition, hydrolysis under strongly alk. condition, and diazo coupling with BNH_2 under alk. condition (B = same as I). Thus, 2-amino-5-hydroxynaphthalene-1,7-disulfonic acid was treated with p-MeC₆H₄SO₃Cl, diazotized, coupled with 5-amino-4-hydroxynaphthalene-2,7-disulfonic acid at pH 2.4-2.8, coupled with diazotized Na 4-nitroaniline-2-sulfonate at pH 7.0-8.0, hydrolyzed with NaOH at pH 10.5-11.0, and coupled with diazotized Na 4-nitroaniline-2-sulfonate at pH 7.0-8.0 to give triazo dye IV (Ar = 4-nitro-2-sulfophenyl) with purity 94.5%.



Patent Information

Patent No.	Kind	Date	Application No.	Date
JP 2006076908	A	Mar 23, 2006	JP 2004-261153	Sep 08, 2004
JP 4641768	B2	Mar 02, 2011		

Priority Application

JP 2004-261153	Sep 08, 2004
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Indexing

Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers (Section 41-3)
 Section cross-reference(s):25, 40, 42

Supplementary Terms

naphthol polyazo dye manuf fiber dyeing; ink jet printing naphthol polyazo dye manuf

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11. Disazo compounds and water-thinned inks and colored articles

By: Ono, Hiroaki; Matsui, Takahiko; Yoneda, Takashi; Shirasaki, Yasuo; Kawaida, Yoshiaki

Assignee: Nippon Kayaku Co., Ltd., Japan

Patent Information: Nov 18, 2004, JP 2004323712, A

Application: Apr 25, 2003, JP 2003-121336

Priority: Apr 25, 2003, JP 2003-121336

Source: Jpn. Kokai Tokkyo Koho, 35 pp., Patent, 2004, CODEN: JKXXAF

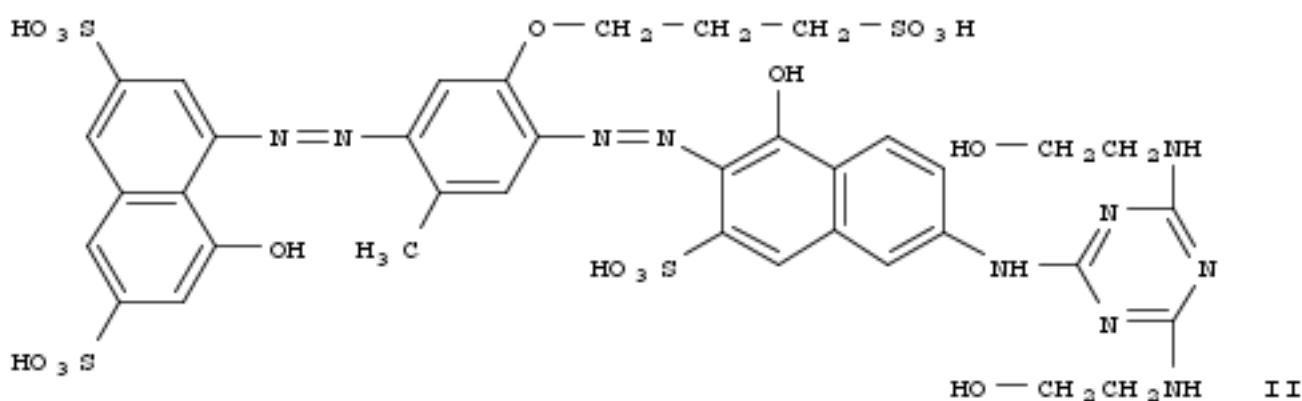
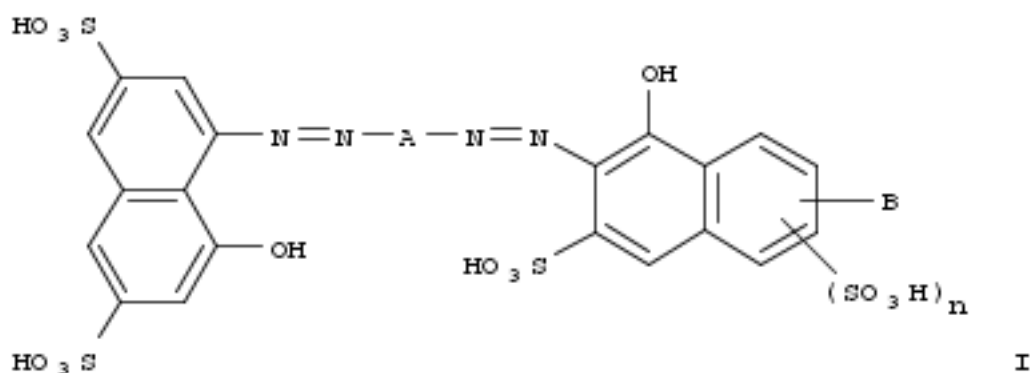
Classifications: Main IPC: C09D011-00, Secondary IPC: B41J002-01; B41M005-00; C07D251-46; C07D251-52; C07D251-70; C09B031-08;

Accession Number: 2004:993269, CAN 141:412572, CAPLUS

Language: Japanese

Abstract

The inks contain I (A = 2,5-disubstituted 1,4-phenylene, substituted 1,4-naphthalene; B = substituted triazinylamino; n = 0, 1; where B is at 2- or 3-position and sulfo group is at 3- or 4-position of the naphthalene ring). Thus, II was prepd. and formulated into an aq. ink-jet ink giving images with high color (black) d., good resistance to ozone, light and water when printed on paper.



Patent Information

Patent No.	Kind	Date	Application No.	Date
JP 2004323712	A	Nov 18, 2004	JP 2003-121336	Apr 25, 2003

Priority Application

JP 2003-121336	Apr 25, 2003
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Indexing

Coatings, Inks, and Related Products (Section 42-12)
Section cross-reference(s):41

Supplementary Terms

water thinned jet printing ink disazo compd; light water ozone resistance aq jet printing ink

12. Water-based black ink compositions and colored materials

By: Ohno, Hiroaki; Yamaguchi, Toru; Matsui, Takahiko; Yoneda, Takashi; Kawaida, Yoshiaki; Shirasaki, Yasuo; Nagasaki, Kazunobu

Assignee: Nippon Kayaku Kabushiki Kaisha, Japan

Patent Information: Sep 16, 2004, WO 2004078860, A1

Application: Mar 04, 2004, WO 2004-JP2779

Priority: Mar 05, 2003, JP 2003-58083, Jul 02, 2003, JP 2003-270309, Aug 07, 2003, JP 2003-289245, Mar 04, 2004, WO 2004-JP2779

Source: PCT Int. Appl., 111 pp., Patent, 2004, CODEN: PIXXD2

Classifications: Main IPC: C09D011-00, Secondary IPC: C09B033-28; B41J002-01; B41M005-00;

Accession Number: 2004:756788, CAN 141:262218, CAPLUS

Language: Japanese

Abstract

The ink comps. comprise a water-sol. black dye exhibiting ozone resistance and a condensate compd. from 4,4'-dinitrostilbene-2,2'-disulfonic acid and aminobenzenes (e.g., 4'-sulfo-4-aminoazobenzene) or a redn. product of the condensate. The ink comps. have excellent storage stability and are suitable for use in ink-jet recording, and realize neutral hue and black of high printing d. The prints of the inks have excellent ozone gas resistance, lightfastness, moisture resistance, and color rendering properties.

Patent Information

Patent No.	Kind	Date	Application No.	Date
WO 2004078860	A1	Sep 16, 2004	WO 2004-JP2779	Mar 04, 2004
CA 2518413	A1	Sep 16, 2004	CA 2004-2518413	Mar 04, 2004
CA 2518413	C	Mar 29, 2011		
JP 2004285351	A	Oct 14, 2004	JP 2004-60626	Mar 04, 2004
JP 4517174	B2	Aug 04, 2010		
EP 1602695	A1	Dec 07, 2005	EP 2004-717249	Mar 04, 2004
EP 1602695	B1	Apr 23, 2008		
CN 1756812	A	Apr 05, 2006	CN 2004-80005972	Mar 04, 2004
CN 100366685	C	Feb 06, 2008		
TW I330656	B	Sep 21, 2010	TW 2004-105661	Mar 04, 2004
KR 1030757	B1	Apr 26, 2011	KR 2005-7016553	Mar 04, 2004
JP 2005036222	A	Feb 10, 2005	JP 2004-195399	Jul 01, 2004
JP 4605635	B2	Jan 05, 2011		
JP 2005068416	A	Mar 17, 2005	JP 2004-226566	Aug 03, 2004
JP 4605638	B2	Jan 05, 2011		
US 20060144288	A1	Jul 06, 2006	US 2005-547850	Sep 01, 2005
US 7462228	B2	Dec 09, 2008		

Priority Application

JP 2003-58083	A	Mar 05, 2003
JP 2003-270309	A	Jul 02, 2003
JP 2003-289245	A	Aug 07, 2003
WO 2004-JP2779	W	Mar 04, 2004

Indexing

Coatings, Inks, and Related Products (Section 42-12)
Section cross-reference(s):41

Supplementary Terms

water sol black azo dye ozone resistance; aq jet printing ink storage stability lightfastness moisture resistance

Citations

1)Anon; RN <collkey context="embedded" form="n-2-1" fkey="y" coll="registry">546079-42-9 REGISTRY 2003

2)Anon; RN <collkey context="embedded" form="n-2-1" fkey="y" coll="registry">554433-03-3 REGISTRY 2003

3)Canon Inc; JP 55-144069 A 1980

4)Canon Inc; US 4395288 A 1986

5)Canon Inc; JP 61-18590 B2 1986

6)Hosoda, Y; Dai 4 Han, Kabushiki Kaisha Gihodo 1966, 190

7)Taoka Chemical Co Ltd; JP 08-302220 A 1996

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13. 2-(3-sulfopropoxy)anilines as intermediates for azo dyes and their manufacture

By: Ono, Hiroaki

Assignee: Nippon Kayaku Co., Ltd., Japan

Patent Information: Mar 18, 2004, JP 2004083492, A

Application: Aug 27, 2002, JP 2002-247335

Priority: Aug 27, 2002, JP 2002-247335

Source: Jpn. Kokai Tokkyo Koho, 10 pp., Patent, 2004, CODEN: JKXXAF

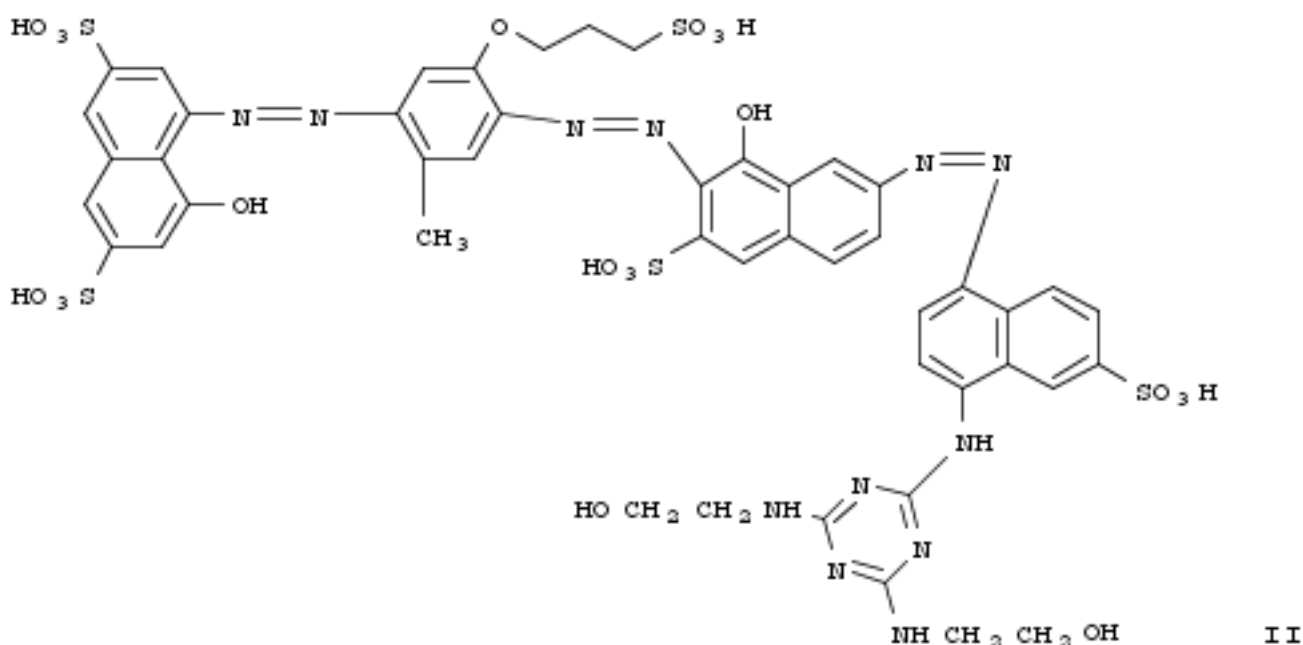
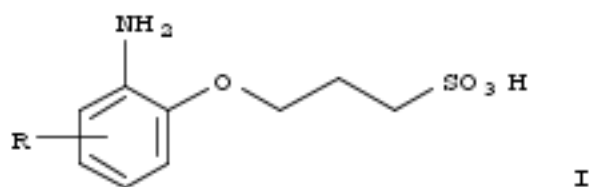
Classifications: Main IPC: C07C309-11, Secondary IPC: C07C303-22;

Accession Number: 2004:217173, CAN 140:254981, CAPLUS

Language: Japanese

Abstract

The anilines are I (R = C₁₋₄ alkyl, C₁₋₄ alkoxy, halo). Thus, 2-hydroxy-5-methylacetanilide was treated with propane sultone in the presence of K₂CO₃ and hydrolyzed with HCl to 94.8% give I (R = 5-Me) with purity 89%. Dye II, esp. useful as jet-printing black ink, was manufd. from I.



Patent Information

Patent No.	Kind	Date	Application No.	Date
JP 2004083492	A	Mar 18, 2004	JP 2002-247335	Aug 27, 2002
JP 4111777	B2	Jul 02, 2008		

Priority Application

JP 2002-247335 Aug 27, 2002

Indexing

Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers (Section 41-9)
Section cross-reference(s):25, 42

Supplementary Terms

sulfopropoxyaniline azo dye intermediate manuf; hydroxymethylacetanilide propane sultone substitution
sulfopropoxyaniline manuf; printing ink azo dye intermediate sulfopropoxyaniline

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14. Trisazo compounds, water-base ink compositions, and colored articles

By: Ohno, Hiroaki; Yoneda, Takashi; Yamaguchi, Toru; Matsui, Takahiko; Kawaida, Yoshiaki; Shirasaki, Yasuo

Assignee: Nippon Kayaku Kabushiki Kaisha, Japan

Patent Information: Feb 12, 2004, WO 2004013232, A1

Application: Aug 01, 2003, WO 2003-JP9832

Priority: Aug 05, 2002, JP 2002-227195, Aug 09, 2002, JP 2002-233750, Aug 01, 2003, WO 2003-JP9832

Source: PCT Int. Appl., 98 pp., Patent, 2004, CODEN: PIXXD2

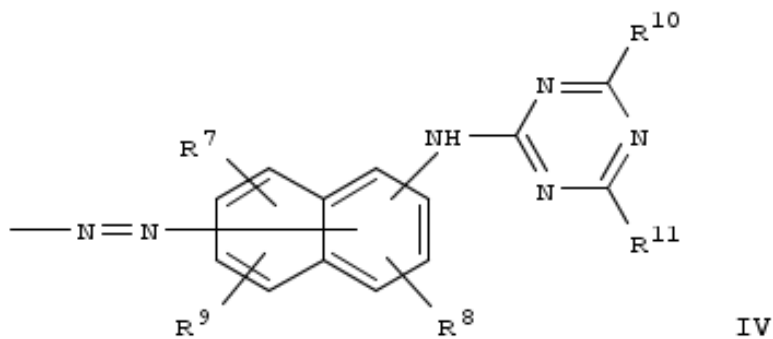
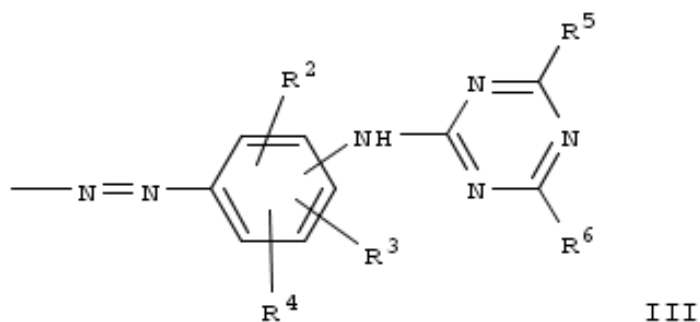
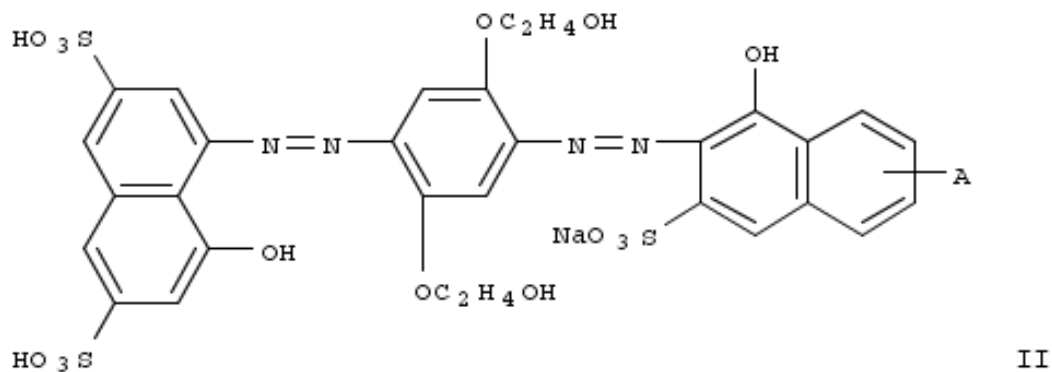
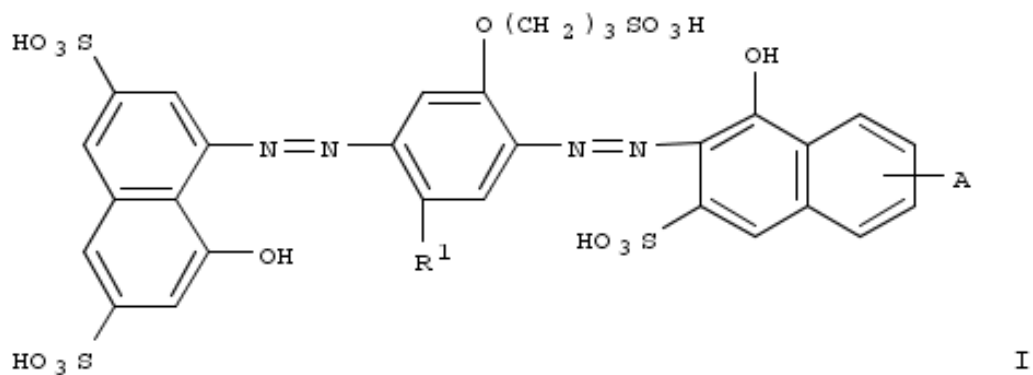
Classifications: Main IPC: C09B031-18, Secondary IPC: C09B043-16; C09D011-00; B41J002-01; B41M005-00;

Accession Number: 2004:120914, CAN 140:165574, CAPLUS

Language: Japanese

Abstract

The present invention relates to ink compns. contg. trisazo compds. I, II, or salts thereof, wherein R¹ = H or C₁₋₄ alkyl or alkoxy; A = III or IV bonded at the 2 or 3 position; and R², R³, R⁴, R⁵, R⁶, R⁷, R⁸, R⁹, R¹⁰, R¹¹ = arbitrary substituent. The ink compns. are useful for ink-jet recording and writing tools and can give recorded images which have high d. and are excellent in ozone gas resistance, light fastness, water resistance, and color rendition. The compns. are excellent in storage stability as recording fluid. Thus, an ink compn. comprising cyanurate deriv.-modified trisazo compd. (prepn. given) with max. absorption at 611 nm 3.0, glycerin 5.0, urea 5.0, N-methyl-2-pyrrolidone 4.0, iso-Pr alc. 3.0, and butylcarbitol 2.0 parts showed good light, ozone gas, moisture resistance, and color rendition when used for an ink-jet printer.



Patent Information

Patent No.	Kind	Date	Application No.	Date
WO 2004013232	A1	Feb 12, 2004	WO 2003-JP9832	Aug 01, 2003
JP 2004067797	A	Mar 04, 2004	JP 2002-227195	Aug 05, 2002
JP 2004075719	A	Mar 11, 2004	JP 2002-233750	Aug 09, 2002
JP 4270486	B2	Jun 03, 2009		
AU 2003252356	A1	Feb 23, 2004	AU 2003-252356	Aug 01, 2003

Priority Application

JP 2002-227195	A	Aug 05, 2002
JP 2002-233750	A	Aug 09, 2002
WO 2003-JP9832	W	Aug 01, 2003

Indexing

Coatings, Inks, and Related Products (Section 42-12)
Section cross-reference(s):41

Supplementary Terms

trisazo compd water base ink compn colored article

Citations

- 1)Anon; WO 02074865 A1
2)Anon; [EP 0656407 A2](#)
3)Anon; JP 7173422 A

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15. Synthesis of water-soluble triazo colorants for water-based black ink compositions having long term stability

By: Ono, Hiroaki; Matsui, Takahiko; Yamaguchi, Toru; Shirasaki, Yasuo; Kawaida, Yoshiaki

Assignee: Nippon Kayaku Co., Ltd., Japan

Patent Information: Oct 15, 2003, JP 2003292808, A

Application: Mar 29, 2002, JP 2002-95790

Priority: Mar 29, 2002, JP 2002-95790

Source: Jpn. Kokai Tokkyo Koho, 13 pp., Patent, 2003, CODEN: JKXXAF

Classifications: Main IPC: C09B031-18, Secondary IPC: B41J002-01; B41M005-00; C09B031-20; C09B031-22; C09D011-00;

Accession Number: 2003:809496, CAN 139:308868, CAPLUS

Language: Japanese

Abstract

The triazo colorants have high water soly. and are suitable for high d. printing in ink-jet recording or writing inks with good resistance to ozone gas, light, and water. Thus, 2.5 parts a triazo pigment (prepn. and structure given) was mixed with glycerin 5.0, urea 5.0, N-methyl-2-pyrrolidone 4.0, isopropanol 3.0, butylcarbene 2.0, and (water + ammonia water) 78.5 parts to give an ink compn. showing claimed properties.

Patent Information

Patent No.	Kind	Date	Application No.	Date
JP 2003292808	A	Oct 15, 2003	JP 2002-95790	Mar 29, 2002

Priority Application

JP 2002-95790	Mar 29, 2002
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Indexing

Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers (Section 41-3)
Section cross-reference(s):42

Supplementary Terms

water sol triazo colorant pigment synthesis black ink compn

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16. Water-based black ink compositions with good light resistance, jet printing method using them, and jet printers

By: Kitayama, Hirokazu; Shirasaki, Yasuo; Ohno, Hiroaki; Tabei, Itaru; Nanba, Shinichi

Assignee: Nippon Kayaku Co., Ltd., Japan

Patent Information: Nov 22, 2002, JP 2002332426, A

Application: May 08, 2001, JP 2001-136880

Priority: May 08, 2001, JP 2001-136880

Source: Jpn. Kokai Tokkyo Koho, 12 pp., Patent, 2002, CODEN: JKXXAF

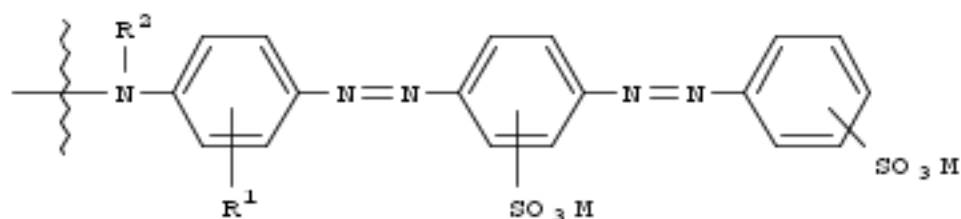
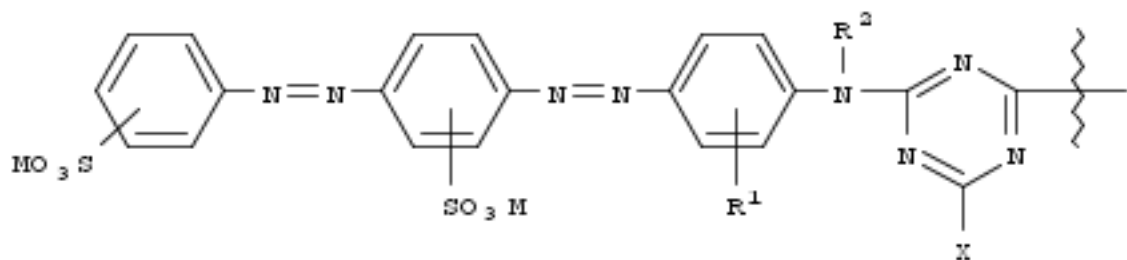
Classifications: Main IPC: C09D011-00, Secondary IPC: B41J002-01; B41M005-00; C09B031-08; C09B031-18; C09B033-28;

Accession Number: 2002:886250, CAN 137:371476, CAPLUS

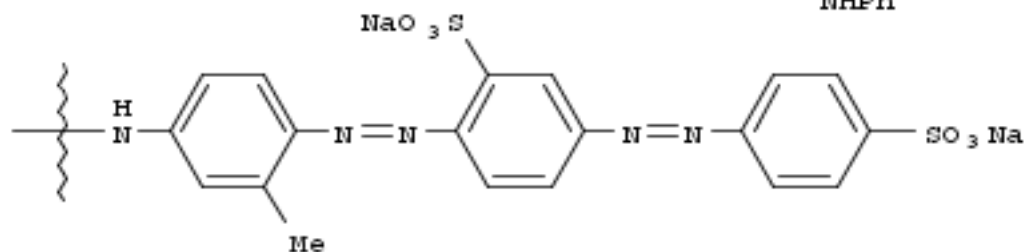
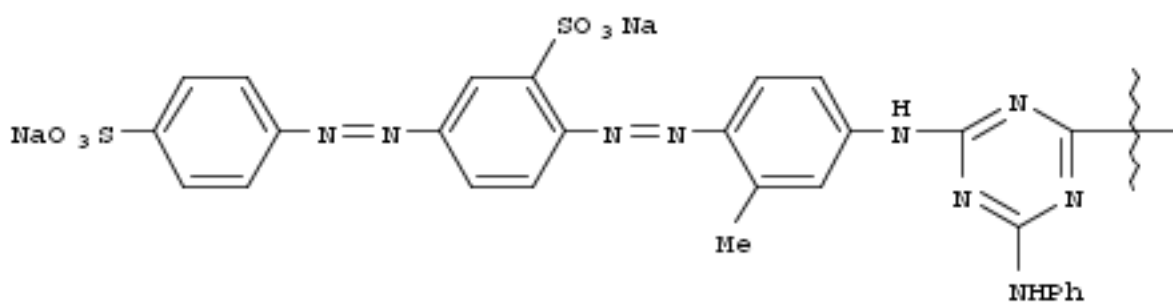
Language: Japanese

Abstract

The ink compns. contain triazine dyes I [R^1 = H, alkyl, alkoxy, sulfonic, carboxyl, etc.; R^2 = H, alkyl; X = Cl, OH, alkoxy, (un)substituted phenoxy, amino, etc.; M = H, alkali metal, alk. earth metal, org. amine cation, ammonium] and black dyes. Thus, an ink contg. a disazo black dye and II was jet-printed on a paper to show good ozone and water resistance.



I



II

Patent Information

Patent No.	Kind	Date	Application No.	Date
JP 2002332426	A	Nov 22, 2002	JP 2001-136880	May 08, 2001
JP 4947677	B2	Jun 06, 2012		

Priority Application

JP 2001-136880	May 08, 2001
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Indexing

Coatings, Inks, and Related Products (Section 42-12)
Section cross-reference(s):41, 74

Supplementary Terms

jet ink black triazine disazo dye; aq ink jet printing light resistance

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17. Water-soluble disazo compounds, water-based black ink compositions, and colored materials

By: Ohno, Hiroaki; Tabei, Itaru; Nanba, Shinichi; Shirasaki, Yasuo; Kitayama, Hirokazu

Assignee: Nippon Kayaku Co., Ltd., Japan

Patent Information: Sep 25, 2002, JP 2002275380, A

Application: Mar 19, 2001, JP 2001-77754

Priority: Mar 19, 2001, JP 2001-77754, Mar 15, 2002, WO 2002-JP2467

Source: Jpn. Kokai Tokkyo Koho, 13 pp., Patent, 2002, CODEN: JKXXAF

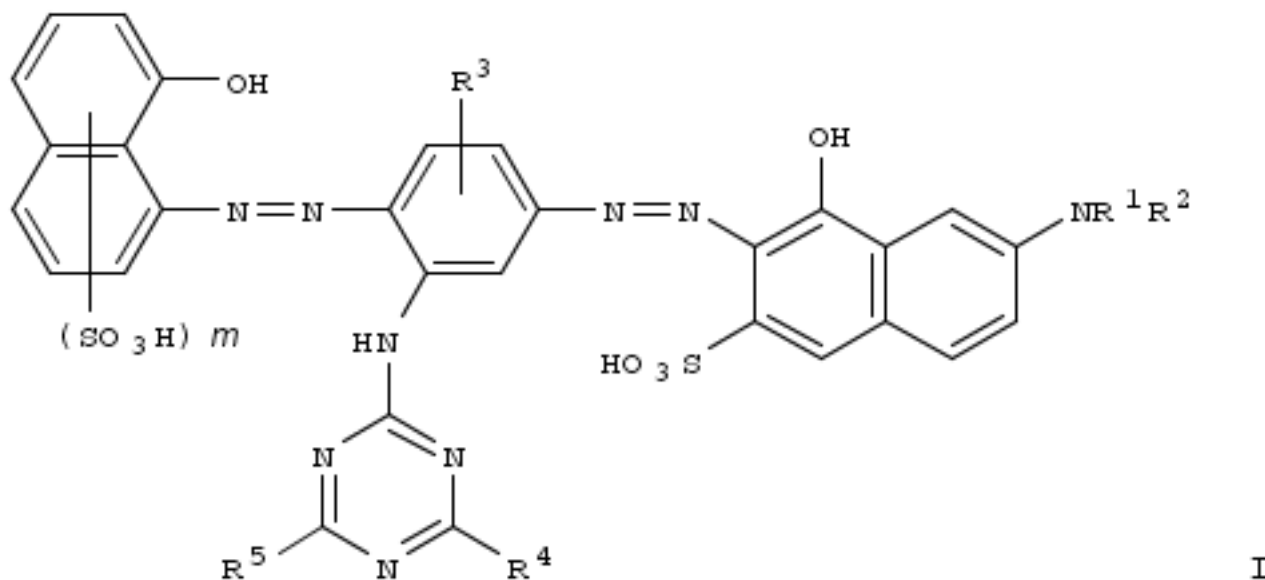
Classifications: Main IPC: C09B031-072, Secondary IPC: B41J002-01; B41M005-00; C07D251-50; C07D251-52; C07D251-54; C09B062-09; C09D011-00;

Accession Number: 2002:728964, CAN 137:249257, CAPLUS

Language: Japanese

Abstract

The compds. are hydroxysulfonaphthalene- and triazine-contg. disazo compds. I [R^1 , R^2 = H, alkyl, alkanoyl, hydroxyalkyl, (substituted) Ph, benzoyl, benzyl; R^3 = H, alkyl, alkoxy, alkoxyalkyl, carboxyl, sulfonyl; R^4 , R^5 = (substituted) amino, OH, halo; m = 1, 2] or their salts. Thus, an image formed by using an ink compn. contg. I (R^1 = H, R^2 = 4-carboxyphenyl, R^3 = OMe, R^4 = 4-sulfonylphenylamino, R^5 = morpholino, m = 2) manufd. from 3,6-disulfo-8-aminonaphthyl p-toluenesulfonate, 3-amino-4-methoxyacetanilide, 7-(4'-carboxyphenyl)amino-1-hydroxynaphthalene-3-sulfonic acid, cyanuric chloride, 4-aminobenzenesulfonic acid, and morpholine showed good water and light resistance.

**Patent Information**

Patent No.	Kind	Date	Application No.	Date
JP 2002275380	A	Sep 25, 2002	JP 2001-77754	Mar 19, 2001
JP 4518302	B2	Aug 04, 2010		
WO 2002074865	A1	Sep 26, 2002	WO 2002-JP2467	Mar 15, 2002
TW 574321	B	Feb 01, 2004	TW 2002-104895	Mar 15, 2002

Priority Application

JP 2001-77754	A	Mar 19, 2001
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WO 2002-JP2467

A

Mar 15, 2002

Indexing

Coatings, Inks, and Related Products (Section 42-12)
Section cross-reference(s):41

Supplementary Terms

disazo dye water thinned black ink; water resistance disazo jet printing ink; light resistance disazo jet printing ink; hydroxysulfonaphthalene triazine disazo water soluble dye

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18. Water-soluble disazo compounds, water-base ink composition, and colored object

By: Miyazawa, Takashi; Tabei, Toru; Yamaguchi, Isao; Shirasaki, Yasuo; Yoshioka, Junko

Assignee: Nippon Kayaku K. K., Japan

Patent Information: Oct 08, 1998, WO 9844051, A1

Application: Mar 31, 1998, WO 1998-JP1471

Priority: Mar 31, 1997, JP 1997-94465, Mar 31, 1998, WO 1998-JP1471

Source: PCT Int. Appl., 106 pp., Patent, 1998, CODEN: PIXXD2

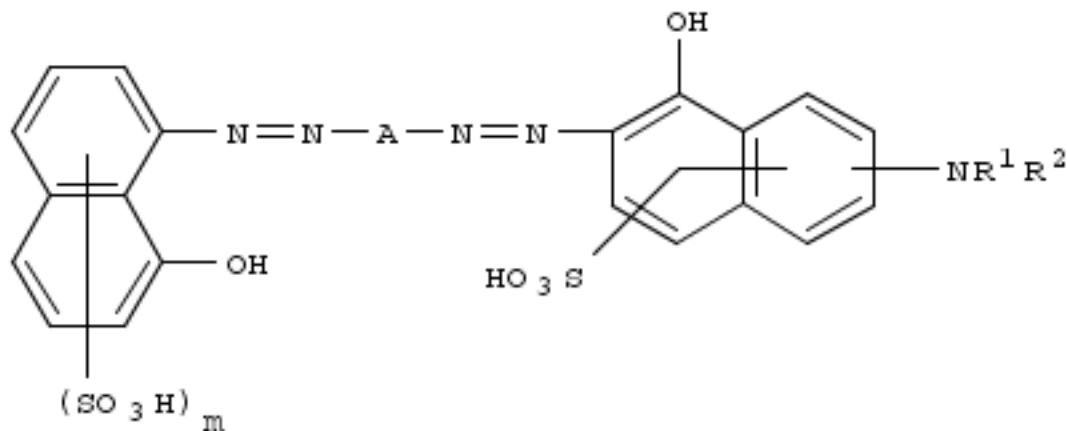
Classifications: Main IPC: C09B031-08

Accession Number: 1998:684909, CAN 129:303796, CAPLUS

Language: Japanese

Abstract

Disazo compds. I [A = (un)substituted phenylene or naphthylene; R¹, R² = H, alkyl, optionally substituted Ph, etc.; m = 1, 2] are highly sol. in water and are stable during long-term storage. The ink compn. contg. diazo compds. gives a print having a high image d. and an excellent fastness to water.

**Patent Information**

Patent No.	Kind	Date	Application No.	Date
WO 9844051	A1	Oct 08, 1998	WO 1998-JP1471	Mar 31, 1998
JP 10279824	A	Oct 20, 1998	JP 1997-94465	Mar 31, 1997
CN 1220683	A	Jun 23, 1999	CN 1998-800395	Mar 31, 1998
EP 928815	A1	Jul 14, 1999	EP 1998-911129	Mar 31, 1998
TW 389783	B	May 11, 2000	TW 1998-104846	Mar 31, 1998
KR 2000016167	A	Mar 25, 2000	KR 1998-709735	Nov 30, 1998
US 6143062	A	Nov 07, 2000	US 1998-180967	Dec 21, 1998

Priority Application

JP 1997-94465	A	Mar 31, 1997
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Indexing

Coatings, Inks, and Related Products (Section 42-12)
Section cross-reference(s):41

Supplementary Terms

disazo compd water base ink; naphthylene disazo compd ink; phenylene disazo compd ink; black disazo dye ink; lightfastness waterfastness dye ink

Citations

- 1)Bayer Ag; DE 19638880 A1 1998
- 2)Bayer Ag; EP 831130 A1 1998
- 3)Ciba-Geigy Ag; JP 05214256 A 1993
- 4)Ciba-Geigy Ag; EP 514330 A1 1993
- 5)Ciba-Geigy Ag; US 5225545 A 1993
- 6)Nippon Kayaku Co Ltd; JP 01172907 A 1989
- 7)Nippon Kayaku Co Ltd; JP 01265205 A 1989
- 8)Nippon Kayaku Co Ltd; JP 09230142 A 1997

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19. Light-polarizing elements and plates

By: Oiso, Shoji; Matsushita, Yoshiaki; Ishizuki, Norio; Emori, Hiroyuki; Ichimura, Kunihiro

Assignee: Nippon Kayaku Co., Ltd., Japan

Patent Information: Sep 05, 1997, JP 09230142, A

Application: May 17, 1996, JP 1996-146550

Priority: May 17, 1995, JP 1995-141427, May 25, 1995, JP 1995-149794, Dec 19, 1995, JP 1995-348169

Source: Jpn. Kokai Tokkyo Koho, 18 pp., Patent, 1997, CODEN: JKXXAF

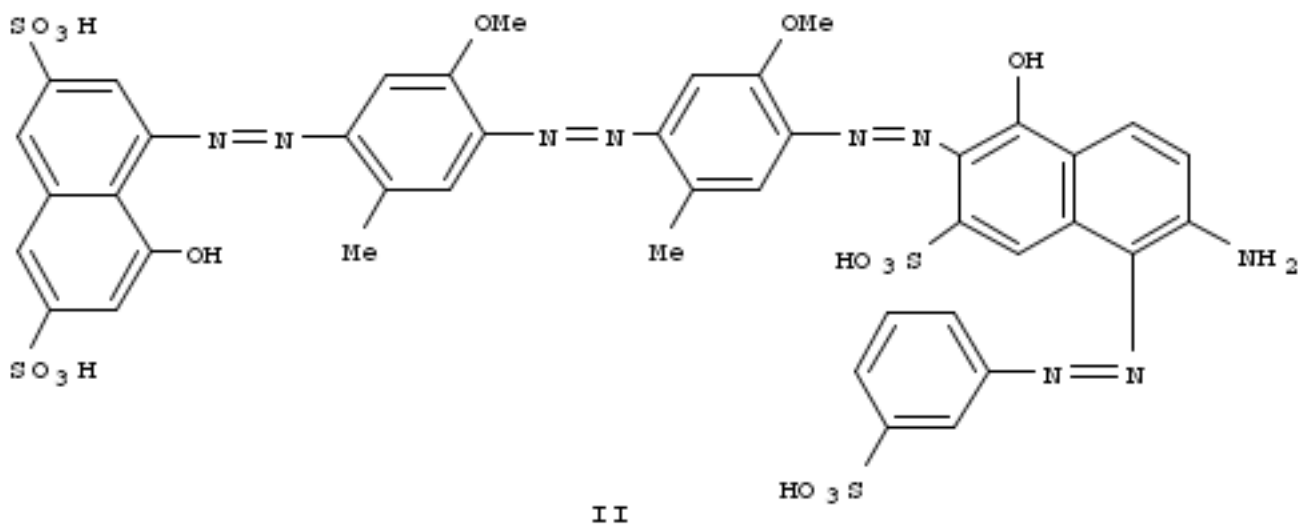
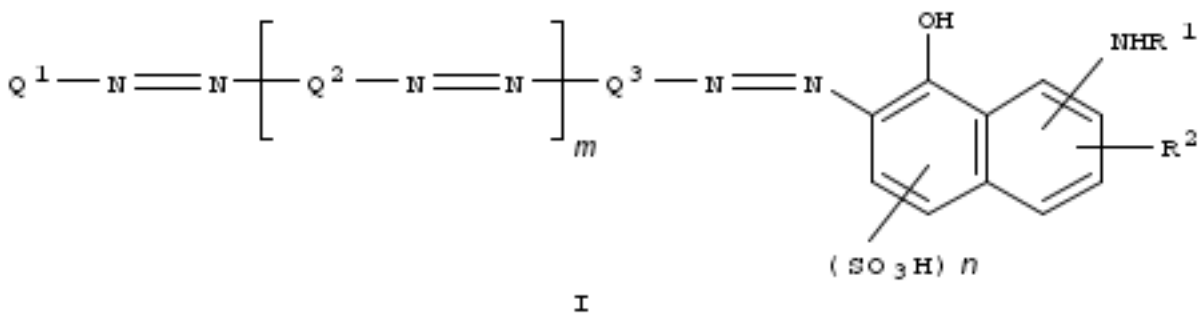
Classifications: Main IPC: G02B005-30, Secondary IPC: C07C245-08;

Accession Number: 1997:617043, CAN 127:279217, CAPLUS

Language: Japanese

Abstract

The title products contain a layer contg. (copperized) compds. I (Q^1 = naphthyl group contg. 1-2 sulfo groups and optionally OH or lower alkoxy group; Q^2 , Q^3 = phenylene or naphthylene group contg. 1-2 substituents chosen from lower alkyl, alkoxy, OH, and sulfo groups; R^1 = H, lower alkyl, Ac, Bz, (un)substituted phenyl; R^2 = H, R^3 , R^4 -disubstituted phenylazo; R^3 , R^4 = H, OH, sulfo, lower alkyl, lower alkoxy; m = 0, 1; n = 1, 2; when m = 0, $R^2 \neq H$). A 4-methacryloyloxazobenzene polymer soln. toluene was spin-coated on a hard glass plate, baked, at 105° for 10 min, polarized, coated with an aq. soln. contg. II and Emulgen 108, and dried to give a light-polarizing plate with polarization 62% at λ_{max} 603 nm.



Patent Information

Patent No.	Kind	Date	Application No.	Date
JP 09230142	A	Sep 05, 1997	JP 1996-146550	May 17, 1996
JP 3963979	B2	Aug 22, 2007		

Priority Application

JP 1995-141427	A	May 17, 1995
JP 1995-149794	A	May 25, 1995
JP 1995-348169	A	Dec 19, 1995

Indexing

Plastics Fabrication and Uses (Section 38-3)
Section cross-reference(s):41

Supplementary Terms

azo dye dichroic light polarizer

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20. Azo dyes and their intermediates. XIII. Synthesis of Chlorantine Fast Red 6 BL

By: Nishi, Tetsunosuke; Takagi, Kunihiro; Abe, Yukio

Source: Kogyo Kagaku Zasshi, Volume: 57, Pages: 649-50, Journal, 1954, CODEN: KGKZA7, ISSN: 0368-5462

Company/Organization: Yamagata Univ., Yonezawa

Accession Number: 1955:44843, CAN 49:44843, CAPLUS

Language: Unavailable

Abstract

cf. C.A. 48, 10347c. Chlorantine Fast Red 6 BL (I), where X = Me and Y = MeO, was synthesized by the following procedure: (a) the esterification of H acid with p-toluenesulfonyl chloride and NaOH at 65-85° for 3.0-4.5 h. in a yield of 52-88%; (b) the synthesis of the mono azo dye 1-(4-amino-5-methoxy-2-methylphenylazo)-8-(p-methylphenylsulfonyloxy)-3,6-naphthalenedisulfonic acid (II) (red-violet needle-like crystals) by treatment of the diazotized H acid ester dispersed in H₂O with 5-methyl-o-anisidine in the presence of HCl and AcONa at 5-10° for 3 h. and then at 40° for 30 min. in a yield of 92%; (c) the prepn. of an intermediate dye (III) from II by treatment with COCl₂ at 40-5° for 3 h. in an aq. soln. contg. AcONa and Na₂CO₃; (d) the prepn. of I, where X = Me, Y = MeO, from III by boiling in aq. soln. of NaOH for 30 min., neutralizing with AcOH, and salting out with AcONa.

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21. Copperable disazo and polyazo dyes

No Inventor data available

Assignee: J. R. Geigy A.-G.

Patent Information: Aug 08, 1951, GB 655909

Application: Sep 14, 1948, GB 1948-24097

Source: Patent, 1951

Accession Number: 1952:34384, CAN 46:34384, CAPLUS

Language: Unavailable

Abstract

In addn. to the dyes prepd. in Swiss 261,632 (C.A. 44, 7553d) and Swiss 267,278-9 (C.A. 45, 3605b) two other dyes are reported. Thus tetrazotized 4,4'-bis(3-amino-4-hydroxybenzamido)diphenyl ketone and 2-naphthol-6-sulfonic (I) acid give a brownish bordeaux dye, tetrazotized 4,4'-bis(3-amino-4-hydroxybenzamido)diphenyl sulfoxide and I give a bordeaux dye.

Patent Information

Patent No.	Kind	Date	Application No.	Date
GB 655909		Aug 08, 1951	GB 1948-24097	Sep 14, 1948

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22. Monoazo chrome dyes

By: Schetty, Guido

Assignee: J. R. Geigy A.-G.

Patent Information: May 01, 1951, US 2551056

Application: Sep 07, 1948, US 1948-48151

Source: Patent, 1951

Accession Number: 1952:34381, CAN 46:34381, CAPLUS

Language: Unavailable

Abstract

In addn. to the dyes prep'd. in Swiss 261,126 (C.A. 44, 9682b) and Swiss 265,102-3-4-5-6-7 (C.A. 45, 866f), other dyes were prep'd. by chroming the products obtained from 2-amino-4-(methylsulfonyl)phenol (I) and acetoacetanilide, 2-amino-4-(methylsulfonyl) benzoic acid (II) and 3-methyl-5-pyrazolone (III), 2-amino-4,6-bis(methylsulfonyl)phenol and 1-phenyl-3-methyl-5-pyrazolone, 2-amino-4-chloro-6-(methylsulfonyl)phenol and III, I and 1-phenyl-5-oxo-2-pyrazoline-3-carboxamide, I and 2,4-dihydroxyquinoline, 2-amino-6-chloro-4-(methylsulfonyl)phenol and 5-hydroxy-o-acetotoluidide, I and 2-naphthol (IV), 2-methoxy(or ethoxy)-5-(methylsulfonyl)aniline and IV, 2-chloro-5-(methylsulfonyl)aniline and p-cresol, I and 1-(3-chlorophenyl)-3-methyl-5-pyrazolone, and I and 1-(p-tolyl)-3-methyl-5-pyrazolone. The m.ps. of the following intermediates are given: 2-nitro-4-(methylsulfonyl)toluene, 118-19°; 2-nitro-4-(methylsulfonyl)benzoic acid, 210-11°; II, 243°; 2-amino-5-nitro-4-(methylsulfonyl)phenol, 236° (decompn.); 4-methoxy-3-nitrophenyl methyl sulfone, 147-8°; 4-ethoxy-3-nitrophenyl methyl sulfone, 135°; and 2-amino-6-nitro-4-(methylsulfonyl)phenol, 204-6°.

Patent Information

Patent No.	Kind	Date	Application No.	Date
US 2551056		May 01, 1951	US 1948-48151	Sep 07, 1948

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23. Metallizable disazo dyes

By: Wehrli, Walter; Steinemann, Willy

Assignee: Sandoz Ltd.

Patent Information: Jan 01, 1952, US 2580867

Application: Mar 20, 1950, US 1950-150797

Source: Patent, 1952

Accession Number: 1952:19122, CAN 46:19122, CAPLUS

Language: Unavailable

Abstract

New metalizable disazo dyes (I) for leather are obtained by coupling a diazotized o-aminophenol or o-aminonaphthol with an 1-amino-8-hydroxynaphthalenesulfonic acid, diazotizing the resulting aminoazo dye, and coupling with a naphthol capable of coupling and which may also be sulfonated. Thus, diazotized 4-nitro-2-aminophenol-6-sulfonic acid (II) 23.4 is coupled in aq. Na_2CO_3 with 1-amino-8-hydroxy-3,6-naphthalenedisulfonic acid (III) 31.9, the resulting aminoazo dye salted out, filtered off, dissolved in H_2O , again diazotized, and coupled with 2-hydroxy-6-naphthalenesulfonic acid (IV) 22.4 parts; the same dye is obtained by diazotizing the p-toluenesulfonate of III 47.3 with IV 22.4, diazotizing the resulting aminoazo dye, and coupling it with II 23.4 parts; the dye is converted to its Co complex by heating several hrs. with an aq. soln. contg. CoSO_4 30 parts in the presence of NaOAc at 90-5°, and similarly to its Fe complex by refluxing with aq. FeSO_4 . Similar disazo dyes and their metal complexes are prep'd. in the same manner: from 6-nitro-2-aminophenol-4-sulfonic acid (V) 23.4, III 31.9, and 2- $\text{C}_{10}\text{H}_7\text{OH}$ 14.4 parts, a dye whose Co complex dyes gray shades, Fe complex dyes brownish gray shades; from II 23.4, 1-amino-8-hydroxy-4,6-naphthalenedisulfonic acid 31.9, and IV 22.4 parts, Co and Cr complexes dye beautiful gray shades; from 2,4- $\text{NH}_2(\text{NO}_2)\text{C}_6\text{H}_3\text{OH}$ 15.4, III 31.9, and 2,6- $\text{HOC}_{10}\text{H}_6\text{SO}_3\text{H}$ (VI) 22.4 parts, Co complex dyes gray shades; from 2-aminophenol-4-sulfonic acid 18.9, III 31.9, and VI 22.4 parts, Co complex dyes gray shades; from II 23.4, III 31.9, and Schäffer's salt 22.4 parts, Cr complex (from aq. CrF_3) dyes beautiful neutral gray shades; from II 23.4, 1-amino-8-hydroxy-4-naphthalenesulfonic acid 23.9, and VI 22.4, Fe complex dyes grayish brown shades, Cr complex dyes gray shades. The metal complexes of the new I dye leather grayish shades of excellent light-fastness.

Patent Information

Patent No.	Kind	Date	Application No.	Date
US 2580867		Jan 01, 1952	US 1950-150797	Mar 20, 1950

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24. Diazo dye

No Inventor data available

Assignee: C I B A Ltd.

Patent Information: Nov 01, 1950, CH 269391

Application: CH

Source: Pages: Addn. to Swiss 248,210 (C.A. 44, 6634h), Patent, 1950

Classifications: US 37A

Accession Number: 1951:34272, CAN 45:34272, CAPLUS

Language: Unavailable

Abstract

1-Amino-2-methoxy-5-cyclohexylbenzene (I), m. 67-9°, is prepd. by methylating and reducing the product obtained from the nitration of the compd. resulting from the condensation of cyclohexanol and C₆H₅OH. I 20.5 is coupled in dil. NaOAc soln. with 47.3 parts of the diazotized p-toluenesulfonic acid ester of H acid. The coupled dye soln. is cooled to 10° and diazotized with NaNO₂ 7 and 30% HCl soln. 35 parts. The diazo compd. is stirred 2 hrs., salted out, filtered, and coupled with a soln. of 2-phenylamino-5-hydroxy-7-naphthalenesulfonic acid 31.5 and Na₂CO₃ 30 in H₂O 300 parts. The toluenesulfonic acid ester group is hydrolyzed by dilg. with H₂O to 1500 parts and heating at 80-5° with the addn. of NaOH 60 parts. The dye colors cotton a reddish blue.

Patent Information

Patent No.	Kind	Date	Application No.	Date
CH 269391		Nov 01, 1950	CH	

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25. Disazo dye

No Inventor data available

Assignee: C I B A Ltd.

Patent Information: Oct 02, 1950, CH 269176

Application: CH

Source: Patent, 1950

Classifications: US 37A

Accession Number: 1951:34271, CAN 45:34271, CAPLUS

Language: Unavailable

Abstract

1-Amino-2-methoxy-5-tert-butylbenzene (I) 17.9 is coupled with the diazo compd. from 47.3 parts of the p-toluenesulfonic acid ester of H acid. This monoazo dye is isolated and treated in H₂O 2000 and Na₂CO₃ 40 parts with COCl₂ at 30° to form a urea-type diazo dye. The toluenesulfonic acid ester group is hydrolyzed at 80° with dil. NaOH soln. to give the finished dye. Cotton may be dyed a red shade. I, m. 28-9°, b₁₈ 146-8°, is prepd. by the ZnCl₂ condensation of isobutyl alc. and phenol, followed by nitration, methylation, and reduction.

Patent Information

Patent No.	Kind	Date	Application No.	Date
CH 269176		Oct 02, 1950	CH	

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26. Copper-containing azo dye

No Inventor data available

Assignee: C I B A Ltd.

Patent Information: Sep 16, 1950, CH 268845

Application: CH

Source: Patent, 1950

Classifications: US 37A

Accession Number: 1951:34270, CAN 45:34270, CAPLUS

Language: Unavailable

Abstract

One mol. of cyanuric chloride is condensed with 2 mols. of J acid and 1 mol. of PhNH₂. This tertiary condensation product 32.3 parts is treated as the Na-salt with 100 parts of 20% Ca(OH)₂ soln., H₂O 1000, and the diazo compd. from 27.4 parts of 3-amino-4-hydroxy-N-methyl-N-(2-sulfoethyl)benzamide (I). The dye is pptd. with HCl soln. The filter cake is treated at 35-40° with a soln. of cryst. CuSO₄ 25, 25% NH₃ 100, and H₂O 1000 parts. The coppered dye is pptd. with NaCl. Wool is dyed a ruby-red shade. I is prepd. by refluxing 3-nitro-4-hydroxybenzoic acid 91 with N-methyltaurine 80 and PCl₃ 30 in C₆H₅Cl 700 parts for 3 hrs. The nitro group is then reduced with Fe and AcOH.

Patent Information

Patent No.	Kind	Date	Application No.	Date
CH 268845		Sep 16, 1950	CH	

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27. Azo dyes

By: Keller, Ernst; Probst, Fritz

Assignee: J. R. Geigy A.-G.

Patent Information: Aug 08, 1950, US 2518023

Application: Oct 23, 1947, US 1947-781748

Source: Patent, 1950

Accession Number: 1951:28444, CAN 45:28444, CAPLUS

Language: Unavailable

Abstract

Red azo dyestuffs of the general formula {2,5,4-MeO(Me)[3,6,8,1-(SO₃H)₂(OH)C₁₀H₄N:N]C₆H₂NHCONH}₂Y (I) were prepd., where Y is a radical of an arom. diamine free from azo chromophores and whose amino groups are not ortho to each other. These dyes dye cellulosic fibers to red colors of good light fastness. They are prepd. by diazotization of the p-toluenesulfonic acid ester of 1-amino-8-hydroxynaphthalene-3,6-disulfonic acid and coupling with 1-amino-3-methyl-6-methoxybenzene. Phosgene is passed through a soln. contg. the azo compd. and an arom. diamine. The p-toluenesulfonic acid group is sapond. in an alk. medium at 80-90° and the dye is pptd. by the addn. of a common salt. The following diamines are used 4,4'-diaminostilbene-2,2'-disulfonic acid (II), benzidine-3-sulfonic acid, p-phenylenediaminecarboxylic acids, m-phenylenediamine, 4,4'-bis(p-aminobenzamido)stilbene-2,2'-disulfonic acid, 2,6-diaminonaphthalene-8-sulfonic acid (III), and 1,5-naphthylenediamine. I, where the sulfonic acid groups are in the 4 and 6 positions of the naphthalene nucleus, is treated with II; on sapon. a red dye is obtained. A monoazo dye, obtained from 1-amino-8-hydroxynaphthalene-3,6-disulfonic acid and 6,6'-diamino-2,2'-dinaphthylurea-8,8'-disulfonic acid, is treated with phosgene and III to yield a yellow-red dye on sapon.

Patent Information

Patent No.	Kind	Date	Application No.	Date
US 2518023		Aug 08, 1950	US 1947-781748	Oct 23, 1947

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28. Metallized azo dyes

No Inventor data available

Assignee: C I B A Ltd.

Patent Information: Jul 01, 1950, CH 267046

Application: CH

Source: Pages: Addn. to Swiss 261,365 (C.A. 44, 6143a), Patent, 1950

Classifications: US 37A

Accession Number: 1951:15094, CAN 45:15094, CAPLUS

Language: Unavailable

Abstract

The diazotized p-toluenesulfonate of 1-amino-8-hydroxynaphthalene-3,6-disulfonic acid is coupled with 1-amino-2-methoxy-5-methylbenzene. This monoazo dye is diazotized and coupled with 2-phenylamino-5-hydroxy-naphthalene-7-sulfonic acid. The p-toluenesulfonate of the disazo dye is then hydrolyzed to give a disazo dye suitable for metallization with triethanolamine, CuSO_4 , and NH_3 . The reaction proceeds at 90-95° in 12-14 hrs. or until no further color change takes place, indicating essentially complete hydrolysis of the methoxy group. Cotton is dyed a light fast blue shade. In Swiss 267,047 1 mol. of 3,3'-dimethoxybenzidine (I) is tetrazotized and coupled in alk. medium with 2 mols. of H acid. This dye is treated with $(\text{HOC}_2\text{H}_4)_2\text{NH}$, NH_3 soln., and NiSO_4 soln. for 14 hrs. at 80-90°. Pure greenish blue shades are obtained on cotton. In Swiss 267,048, the metallized disazo dye is obtained from 1 mol. of tetrazotized I, 1 mol. of H acid, and 1 mol. 2-(2-hydroxyethylamino)-5-hydroxynaphthalene-7-sulfonic acid (II). The dye is treated at 80-90° with a soln. of CuSO_4 , $(\text{HOC}_2\text{H}_4)_2\text{NH}$, and NH_3 . The shade on cotton-dyed goods is a greenish blue. In Swiss 267,049, tetrazotized I is coupled with 2 mols. of II. The dye is metallized with $(\text{C}_2\text{H}_4\text{OH})\text{NH}_2$, NH_3 , and CuSO_4 in soln. The dye is similar in properties to those described above.

Patent Information

Patent No.	Kind	Date	Application No.	Date
CH 267046		Jul 01, 1950	CH	

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29. Substantive azo dyes

No Inventor data available

Assignee: J. R. Geigy, A.-G.

Patent Information: Jan 24, 1949, GB 616523

Application: Aug 31, 1944, GB 1944-16588

Source: Patent, 1949

Accession Number: 1950:54367, CAN 44:54367, CAPLUS

Language: Unavailable

Abstract

Compds. obtained by condensation of 2 mols. of cyanuric chloride successively with 1 mol. of a deriv. of 4,4'-diaminostilbene, 2 mols. of an arylazoarylamine, and 2 mols. of another amine dyed cotton directly fast yellow to red shades. These dyes have the general formula (I), where Y may be replaced by residues from groups A, B, or C. Compds. of group A are 4-amino-1,1'-azobenzene-3'-sulfonic acid, 4-amino-3-methoxy-1,1'-azobenzene-3'-carboxylic acid, the compd. from 2-amino-4,8-naphthalenedisulfonic acid and 3-aminoacetanilide, the compd. from 1-diazo-8-(p-tolylsulfonyloxy)-3,6-naphthalenedisulfonic acid and 1-amino-5-methyl-2-methoxybenzene, the compd. from 1-diazo-8-(p-tolylsulfonyloxy)naphthalene and 1-amino-5-methyl-2-methoxybenzene, 4-amino-2-acetamido-4'-chloro-1,1'-azobenzene-3'-sulfonic acid, 4-amino-4'-hydroxy-1,1'-azobenzene-3'-carboxylic acid, 4-amino-2-methoxy-2'-hydroxy-1,1'-azobenzene-5'-sulfonic acid, 2-amino-5-hydroxy-7-naphthalenesulfonic acid coupled with diazotized o-aminobenzoic acid, diazotized 4-amino-1,1'-azobenzene coupled with 2-amino-5-hydroxy-7-naphthalenesulfonic acid, 4-amino-2-methyl-6-methoxy-4'-acetamido-1,1'-azobenzene-5'-sulfonic acid, 4-amino-2-methyl-4'-hydroxy-3'-carboxy-1,1'-azobenzene-5'-sulfonic acid, the compd. from 1-amino-4-hydroxy-3-carboxy-5-benzenesulfonic acid and 1-amino-3-methyl-6-methoxybenzene, 4-amino-2-methyl-5-methoxy-1,1'-azobenzene-4'-sulfonic acid, the compd. from anthranilic acid diazotized and coupled with 2-(3-aminobenzamido)-5-hydroxy-7-naphthalenesulfonic acid, the compd. from diazotized 1-amino-8-(p-tolylsulfonyloxy)-3,6-naphthalene-disulfonic acid and 1-amino-2-methoxy-5-methylbenzene diazotized and coupled with 2-amino-5-hydroxy-7-naphthalenesulfonic acid, the compd. from 1-[3-(or 4)-aminobenzamido]-4-hydroxy-3-carboxy-5-benzenesulfonic acid diazotized and coupled with 1-amino-3-methyl-6-methoxybenzene. Compds. in group B are Me_2NH , $\text{PhNH}_2\cdot\text{HCl}$, 3-aminoacetanilide, 1-chloro-2,4-diaminobenzene, 1-amino-4-hydroxy-3-benzenecarboxylic acid, PhNHMe , NH_3 , 1-amino-4-hydroxy-3-carboxy-5-benzenesulfonic acid, p-phenylenediamine, 5-amino-2-[2-(or 4)-hydroxy-3-carboxy-5-sulfophenyl]-1,3-benzotriazole, 4'-amino-5,6'-dimethyl-4-hydroxydiphenylmethane-3-carboxylic acid. Compds. from group C are 4-amino-3-methoxy-1,1'-azobenzene-3'-carboxylic acid, 4-amino-4'-hydroxy-1,1'-azobenzene-3'-carboxylic acid, 4-amino-2-methoxy-2'-hydroxy-1,1'-azobenzene-5'-sulfonic acid, 4-amino-2,5-dimethoxy-2'-hydroxy-1,1'-azobenzene-5'-sulfonic acid. The fastness of these dyes is considerably improved by after treatments with metal salts or HCHO , or by sapon. and development with 1-phenyl-3-methyl-5-pyrazolone. A dye was also prepd. from cyanuric chloride and 4,4'-diamino-3,3'-stilbenedicarboxylic acid treated with 4-amino-2-acetamido-4'-chloro-1,1'-azobenzene-3'-sulfonic acid and $\text{PhNH}_2\cdot\text{HCl}$. 4,4'-Diamino-2,2'-bibenzylidenedisulfonic acid and cyanuric chloride were treated with 4-amino-4'-hydroxy-1,1'-azobenzene-3'-carboxylic acid and PhNH_2 .

Patent Information

Patent No.	Kind	Date	Application No.	Date
GB 616523		Jan 24, 1949	GB 1944-16588	Aug 31, 1944

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30. Azo dyes

No Inventor data available

Assignee: J. R. Geigy A.-G.**Patent Information:** Oct 06, 1949, GB 630181**Application:** Oct 30, 1947, GB 1947-28979**Source:** Patent, 1949**Accession Number:** 1950:42375, CAN 44:42375, CAPLUS**Language:** Unavailable**Abstract**

Red dyes for cellulose are prepd. by coupling 2 mols. of a dye, $RN:NR'NH_2$ (IA) with 1 mol. of a mono- or polynuclear aromatic compd. contg. 2 NH_2 groups not ortho to each other. In IA R is an O-acyl-1-amino-8-hydroxy-3,6- or 4,6-naphthalenedisulfonic acid residue and R' is an aromatic amine residue coupling para to the amino group. Thus the p-toluenesulfonic acid ester (I) of 1-amino-8-hydroxy-3,6-naphthalenedisulfonic acid is diazotized and coupled with 1-amino-3-methyl-6-methoxybenzene (II). The resulting dye 62.1 and 4,4'-diamino-2,2'-stilbene disulfonic acid 18.5 are dissolved in H_2O 800 parts by the addn. of Na_2CO_3 $COCl_2$ is passed through the soln. until no more primary amine can be detected. The dye is treated with dil. alkali at 80-90° to saponify the p-toluenesulfonic acid ester, then salted out and dried. It dyes cellulose fibers red shades, fast to light, washing, and H_2O . When II is replaced with 1-amino-3-methoxybenzene the color on cellulose is reddish orange. I, II, and 3-benzidinesulfonic acid give a dye which colors cellulose in clear red shades. A similar dye is obtained when II is replaced with (2-amino-4-methylphenoxy)acetic acid. I, II, and p-phenylenediaminecarboxylic acid give a dye for cellulose of clear red shade. Somewhat more yellowish shades are obtained by the dye prepd. from I, II, and m-phenylenediamine. Red dyes for cellulose are obtained from I, II, and the following diamines: 4,4'-bis(p-aminobenzamido)-2,2'-stilbenedisulfonic acid, 4-amino-4'-(p-aminobenzamido)-2,2'-stilbenedisulfonic acid, 4-amino-4'-(m-aminobenzamido)-2,2'-stilbenedisulfonic acid, p-phenylenediaminesulfonic acid, 1,3-phenylenediamine-4-sulfonic acid, 2,2'-benzidinedisulfonic acid, 3,3'-benzidinedisulfonic acid, 4,4'-diamino-3,3'-disulfodiphenyl-urea, 5-(p-aminobenzamido)-2-amino-1-benzenesulfonic acid, 4-methyl-3,5-diamino-1-benzenesulfonic acid, 4,4'-diamino-2,2'-disulfodiphenyl sulfide, 4,4'-diaminodiphenylamine-2-sulfonic acid, 3,3'-benzidinedicarboxylic acid, p-phenylenediamine, (p-aminobenzoyl)-p-phenylenediamine, benzidine, o-dianisidine, o-tolidine, 4,4'-diaminodiphenylmethane, and 4,4'-diaminodiphenyl sulfide. Bluish red dyes on cellulose fibers are obtained from the p-toluenesulfonic ester of 1-amino-8-hydroxy-4,6-naphthalenedisulfonic acid and II with the following amines: 4,4'-bis(p-aminobenzamido)-2,2'-stilbenedisulfonic acid, 4-amino-4'-(p-aminobenzamido)-2,2'-stilbenedisulfonic acid, 4-amino-4'-(m-aminobenzamido)-2,2'-stilbenedisulfonic acid, p-phenylenediaminesulfonic acid, (p-aminobenzoyl)-p-phenylenediaminesulfonic acid, m-phenylenediamine, p-phenylenediamine, and benzidine. Reddish orange dyes for cellulose are obtained from I and toluidine with 3-benzidinesulfonic acid; and from I and 1-amino-3-methoxybenzene with 3-benzidinesulfonic acid. A red dye is obtained from the p-toluenesulfonate of 1-amino-8-hydroxy-4,6-naphthalenedisulfonate with II when coupled with 4,4'-diamino-2,2'-stilbenedisulfonic acid.

Patent Information

Patent No.	Kind	Date	Application No.	Date
GB 630181		Oct 06, 1949	GB 1947-28979	Oct 30, 1947

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31. Disazo dye

No Inventor data available

Assignee: C I B A Ltd.**Patent Information:** Jun 16, 1949, CH 259330

Application: CH**Source:** Pages: Addn. to Swiss 253,713 (C.A. 44, 6138a), Patent, 1949**Classifications:** US 37A**Accession Number:** 1950:39506, CAN 44:39506, CAPLUS**Language:** Unavailable**Abstract**

The p-toluenesulfonic ester 473 of 1-amino-8-naphthol-3,6-disulfonic acid is diazotized and coupled in acid medium with 2,4-(H₂N)MeC₆H₃OMe 137; the pptd. monoazo dye is diazotized and coupled in aq. Na₂CO₃ with 6-(4-phenoxyanilino)-1-naphthol-3-sulfonic acid 407; and the p-MeC₆H₄SO₂ group is saponified by heating 45 min. at 70-80 ° in a soln. of NaOH 800 in H₂O 20,000 parts. The product (dark blue powder) dyes cellulose fibers blue shades of good light-, wash-, and waterfastness properties.

Patent Information

Patent No.	Kind	Date	Application No.	Date
CH 259330		Jun 16, 1949	CH	

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32. Azo dyes

No Inventor data available

Assignee: J. R. Geigy A.-G.**Patent Information:** Jun 01, 1949, CH 259331**Application:** CH**Source:** Pages: Addn. to Swiss 253,714 (C.A. 44, 6136a), Patent, 1949**Classifications:** US 37A**Accession Number:** 1950:39488, CAN 44:39488, CAPLUS**Language:** Unavailable**Abstract**

Azo dyes which dye cellulose fibers in clear red shades of good light-, water- and washfastness properties were prepared. 3-Benzidinesulfonic acid (I) 13.2 and the monoazo dye (II) 62.1, prepared by coupling the p-toluenesulfonic ester of 1-amino-8-naphthol-3,6-disulfonic acid (III) with 2,4-(H₂N)MeC₆H₃OMe (IV) (or the monoazo dye 60.7 prepared in the same manner from the benzenesulfonic ester of III), are dissolved in H₂O 750 parts with Na₂CO₃ and treated with COCl₂ until no diazotizable amine can be detected. The p-MeC₆H₄SO₂ group is saponified by heating the resulting disazo dye at 80-90° in dil. aq. NaOH. In Swiss 259,332, 1,4-(H₂N)₂C₆H₃CO₂H replaces IV; in Swiss 259,333, m-C₆H₄(NH₂)₂; in Swiss 259,334, 4,4'-bis(p-aminobenzamido-2,2'-stilbenedisulfonic acid); in Swiss 259,335, 2,6-naphthalenediamine-8-sulfonic acid (yellow-red on cellulose); in Swiss 259,336, 1,5-naphthalenediamine; in Swiss 259,337, 1,4-(H₂N)₂C₆H₃SO₃H; in Swiss 259,338, 1,4-(H₂N)(PhCONH)C₆H₃SO₃H; and in Swiss 259,339, 3,3'-benzidinedisulfonic acid.

Patent Information

Patent No.	Kind	Date	Application No.	Date
CH 259331		Jun 01, 1949	CH	

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33. Disazo dye

No Inventor data available

Assignee: C I B A Ltd.**Patent Information:** Jan 16, 1948, CH 248210**Application:** CH**Source:** Patent, 1948

Classifications: US 37A

Accession Number: 1950:34680, CAN 44:34680, CAPLUS

Language: Unavailable

Abstract

The p-toluenesulfonic ester of 1-amino-8-hydroxy-3,6-naphthalenedisulfonic acid 47.3 is diazotized and coupled with 17.9 parts 2-methoxy-5-tert-butylaniline, b_{18} 146-8°, m. 28-9° (prepn. given). The monoazo compd. is diazotized and coupled with 2-phenylamino-5-hydroxy-7-naphthalenesulfonic acid 31.5 parts. To split off the toluenesulfonic group, the coupling liquid is heated to 80°, and the soln. displaced by adding a sufficient quantity of 30% NaOH to obtain a 4% NaOH soln. The soln. is then stirred for 45 min. at 80°, cooled to 30°, the pptd. dyestuff filtered under suction, and dried. The new dye-stuff is a dark powder dissolving in water to a reddish blue color. It dyes cotton to a reddish tint. The color is lightproof and watermark-resistant.

Patent Information

Patent No.	Kind	Date	Application No.	Date
CH 248210		Jan 16, 1948	CH	

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34. Azo dyes

No Inventor data available

Assignee: C I B A Ltd.

Patent Information: May 01, 1948, CH 249778

Application: CH

Source: Patent, 1948

Classifications: US 37A

Accession Number: 1950:31515, CAN 44:31515, CAPLUS

Language: Unavailable

Abstract

The diazonium compd. of the p-toluenesulfonate of 1-amino-8-hydroxy-3,6-naphthalenedisulfonic acid is coupled with 8-(4-phenoxyanilino)-1-naphthalenesulfonic acid (I). The p-MeC₆H₄SO₃H part is split off by sapon. The new azo dye is a dark blue powder which dyes wool from AcOH baths a fast, pure blue. In Swiss 249,779 the diazotized monoazo dye m-(4-amino-1-naphthylazo)benzenesulfonic acid (II) is coupled with I. In Swiss 249,780 II is coupled with 8-(4-o-toloxylanilino)-1-naphthalenesulfonic acid (III). In Swiss 249,781 II is coupled with 1-[4-(p-chlorophenoxy)anilino]-8-naphthalenesulfonic acid (IV). In Swiss 249,782 8-amino-5-phenylazo-2-naphthalenesulfonic acid is coupled with III. In Swiss 249,783 8-(4-amino-1-naphthylazo)-1-naphthalenesulfonic acid is coupled with I. In Swiss 249,784 m-(4-amino-5-methoxy-o-tolylazo)benzenesulfonic acid is coupled with IV. Cf. C.A. 43, 5597e.

Patent Information

Patent No.	Kind	Date	Application No.	Date
CH 249778		May 01, 1948	CH	

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35. Triazine azo dyes

By: Keller, Ernst; Zweidler, Reinhard

Assignee: J. R. Geigy A.-G.

Patent Information: Jan 18, 1949, US 2459435

Application: Aug 28, 1944, US 1944-551622

Source: Patent, 1949

Accession Number: 1950:23805, CAN 44:23805, CAPLUS

Language: Unavailable

Abstract

By the reaction of 4,4'-diamino derivs. of compds. from the stilbene or bibenzyl series with cyanuric chloride and subsequently condensing through the NH_2 -group of an amino azo compd., new dyes are obtained whose fastness to water and washing are improved by formaldehyde treatment. 4,4'-Diamino-2,2'-stilbenedisulfonic acid (I) (37 parts) is treated with 37 parts cyanuric chloride (II) at $0-4^\circ$ and then further condensed with 55.4 parts 4-amino-1,1'-azobenzene-3'-sulfonic acid at $40-2^\circ$. This product is treated at $85-95^\circ$ with Me_2NH and the dye formed is salted out and aftertreated with HCHO . I, II, 4-amino-3-methoxy-1,1'-azobenzene-3'-carboxylic acid, and 3-acetamido-1-aminobenzene give a brown dye which dyes cellulose fibers in yellow shades. I, II, and 2-amino-4,8-naphthalenedisulfonic acid diazotized and coupled with 1-amino-3-acetamidobenzene give an orange powder which dyes cellulose fibers in red-orange shades. I, II, and the monoazo dye (III) from 1-diazo-8-(p-tolylsulfonyloxy)-3,6-naphthalenedisulfonic acid and 1-amino-3-methyl-6-methoxybenzene, upon treatment with aniline-HCl and NaOAc yield a dark red powder which dyes cellulose in red shades. Treatment with HCHO improves the fastness. 4,4'-Diaminostilbene and II treated with the monoazo dye III also give a red dye. The dye from I, II, and III can be aftertreated with 2-naphthol to give yellow-red shades. II, 4,4'-diamino-3,3'-stilbenecarboxylic acid, and 4-amino-2-acetamido-1,1'-azobenzene-4'-chloro-3'-sulfonic acid are condensed and treated with aniline-HCl and NaOAc to give a yellow-red powder. I, II, and 4-amino-2-acetamido-1,1'-azobenzene-4'-chloro-3'-sulfonic acid are further condensed with 1-chloro-2,4-diaminobenzene to give an orange-yellow dye. I, II, and 2-amino-5-hydroxy-7-naphthalenesulfonic acid are treated with aniline-HCl and NaOAc to give a bright gray. When the dye is developed on the fiber with diazotized p-nitroaniline, orange to red shades are obtained. I, II, and the disazo dye from diazotized 4-amino-1,1'-azobenzene and 2-amino-5-hydroxy-7-naphthalenesulfonic acid are treated with metanilic acid to give a dark red powder which dyes cellulose fibers in blue-red shades. Aniline in place of metanilic acid also gives a dark red dye. I, II, 4-amino-2-methyl-6-methoxy-4'-acetamido-1,1'-azobenzene-5'-sulfonic acid, and aniline give a yellow-orange dye. I, II, the azo dye from diazotized 2-naphthylamine-4,6-disulfonic acid and m-toluidine, $\text{PhNH}_2\cdot\text{HCl}$, and NaOH give a brown powder which dyes cellulose in yellow shades. I and II further are condensed with 2-(3-aminobenzamido)-5-naphthol-7-sulfonic acid and then treated with 1,3-diamino-4-chlorobenzene. The bright powder coupled with diazotized 4-amino-1,1'-azobenzene-4'-sulfonic acid gives a dye which gives red shades on cellulose. Other dyes were prep'd. from 4,4'-diamino-2,2'-stilbenedisulfonic acids with both amino groups substituted with a C:N:CB:N:CA:N group. Compds., giving A and B, resp., and the color on cellulose fibers are listed below: 4-amino-1,1'-azobenzene-3'-sulfonic acid, aniline (IV), yellow; 4-amino-2-methyl-5-methoxy-1,1'-azobenzene-4'-sulfonic acid, IV, yellow; 4-amino-3-methoxy-1,1'-azobenzene-3'-carboxylic acid, IV, yellow-green; 4-amino-2-acetamido-1,1'-azobenzene-4'-chloro-3'-sulfonic acid (V), IV, yellow; V, NH_3 , yellow; V, Me_2NH , yellow; V, 3-aminoacetanilide, yellow. 2-Naphthylamine-4,8-disulfonic acid diazotized and coupled with 3-aminoacetanilide as A with 3-aminoacetanilide, NH_3 , Me_2NH , and IV as B gives reddish yellow shades. The dye from the diazotized p-toluenesulfonate of 8-amino-1-naphthol-3,6-disulfonic acid and 1-amino-2-methoxy-5-methylbenzene as A saponified with methylaniline, Me_2NH , and p-(NH_2) $_2\text{C}_6\text{H}_4$ as B gives red shades on cellulose. Dyes of the formula $\text{N:CA:N:CB:N:CNHC}_6\text{H}_3(\text{SO}_3\text{H})\text{CH:CHC}_6\text{H}_3(\text{SO}_3\text{H})\text{NHC:N:CB:N:CB:N}$ with compds. giving A and B and the color are listed as follows. 4-Amino-5-methoxy-1,1'-azobenzene-3'-carboxylic acid as A with Me_2NH , IV, and 3-aminoacetanilide as B give green-yellow shades. 2-Naphthylamine-4,8-disulfonic acid diazotized and coupled with 3-aminoacetanilide as A with 1-chloro-2,4-diaminobenzene as B give red-yellow shades. 4-Amino-4'-acetamido-5-methoxy-2-methyl-1,1'-azobenzene-3'-sulfonic acid as A with IV as B gives a yellow shade as does V and IV. A dye of the formula $\text{N:CA:N:CX:N:CNHC}_6\text{H}_3(\text{SO}_3\text{H})\text{CH:CHC}_6\text{H}_3(\text{SO}_3\text{H})\text{NHC:N:CX:N:CB:N}$, where A is the dye from the diazotized p-toluenesulfonate of 8-amino-1-naphthol-3,6-disulfonate and 1-amino-2-methoxy-5-methylbenzene and saponified, B is 4-amino-3-methoxy-1,1'-azobenzene-3'-carboxylic acid, and X is IV gives a yellow-red color on cellulose.

Patent Information

Patent No.	Kind	Date	Application No.	Date
US 2459435		Jan 18, 1949	US 1944-551622	Aug 28, 1944

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36. Azo dyes

No Inventor data available

Assignee: Ciba Ltd.

Patent Information: Dec 10, 1948, GB 614191

Application: Jul 05, 1946, GB 1946-20159

Source: Patent, 1948

Accession Number: 1949:42658, CAN 43:42658, CAPLUS

Language: Unavailable

Abstract

Coupling a diazo compd., which may contain one or more azo groups, with an 8-amino-1-naphthalenesulfonic acid, contg. as a substituent in the NH_2 group the residue of a diaryl ether, yields dyes suitable for dyeing silk and wool, and produces dyes which have improved properties of fastness. The diazonium compd., prepd. in the usual manner from 473 parts of the p-toluenesulfonate of 8-amino-1-naphthol-3,6-disulfonic acid, is mixed at 0° with a soln. of 8-(p-phenoxyanilino)-1-naphthalenesulfonic acid (I) 400 in MeOH 4000 parts. The deep-blue suspension is stirred until the diazonium compd. can no longer be detected, and the dye is isolated by the addn. of NaCl. The dye 100 is dissolved in a soln. of NaOH 75 in water 5000 parts, and the mixt. is stirred at $60-5^\circ$ until a test portion of the red soln. gives a pure blue on the addn. of NaHCO_3 . The hydrolyzed dye is sepd. by the addn. of HCl, filtered, redissolved in NaHCO_3 , and pptd. with NaCl. A dark-blue powder is obtained which dyes wool from an HOAc bath in fast pure blue tints. I is obtained by stirring 8-amino-1-naphthalenesulfonic acid for 20 hrs. at 180° with an excess of p-aminodiphenyl ether, removing the ether by distn. under reduced pressure, and purifying I through its soly. in C_6H_6 . Other dyes were prepd. from I and the diazo compd. (II) from diazotized metanilic acid and 1-naphthylamine; from II and 8-m-, 8-o-, and 8-p-(o-toloxo)anilino-1-naphthalenesulfonic acids; from II and 8-p-(p-chlorophenoxy)anilino-1-naphthalenesulfonic acid. Also used as intermediates were diazo compds. from diazotized PhNH_2 and 8-amino-1- and -2-naphthalenesulfonic acids, from 5-amino-1-naphthalenesulfonic acid and diazotized 1-naphthylamine, and from diazotized metanilic acid and 2-methoxy-5-methylaniline.

Patent Information

Patent No.	Kind	Date	Application No.	Date
GB 614191		Dec 10, 1948	GB 1946-20159	Jul 05, 1946

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37. Stilbene dyes

No Inventor data available

Assignee: J. R. Geigy A.-G.

Patent Information: May 01, 1946, CH 240125

Application: CH

Source: Patent, 1946

Accession Number: 1949:32923, CAN 43:32923, CAPLUS

Language: Unavailable

Abstract

II is replaced by 1 mol. of the dye from the diazotized p-toluenesulfonic acid ester of 8-amino-1-naphthol-3,6-disulfonic acid and 1-amino-2-methoxy-5-methylbenzene. The dextrose reduction (2 hrs. at $35-40^\circ$) is followed by hydrolysis of the toluenesulfonic acid ester at $90-5^\circ$ for 1/2 hr. The scarlet dye obtained may be aftertreated with HCHO for improved washfastness.

Patent Information

Patent No.	Kind	Date	Application No.	Date
CH 240125		May 01, 1946	CH	

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38. A new direct dye

No Inventor data available

Assignee: J. R. Geigy A.-G.

Patent Information: Aug 31, 1946, CH 244258

Application: Sep 01, 1943, CH

Source: Patent, 1946

Accession Number: 1949:26301, CAN 43:26301, CAPLUS

Language: Unavailable

Abstract

I is treated with 1 mol. each of 5-(p-aminophenylazo)salicylic acid, 5-(4-amino-2-acetamidophenylazo)-2-chlorobenzenesulfonic acid, and aniline. The disazo dye obtained is a brown powder, yellow in water, which colors cellulose fibers yellow.

Patent Information

Patent No.	Kind	Date	Application No.	Date
CH 244258		Aug 31, 1946	CH	Sep 01, 1943

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